

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 September 2002 (26.09.2002)

PCT

(10) International Publication Number
WO 02/074979 A2

(51) International Patent Classification⁷: **C12Q**
(21) International Application Number: PCT/US02/08456
(22) International Filing Date: 20 March 2002 (20.03.2002)
(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
60/276,947 20 March 2001 (20.03.2001) US
(71) Applicant: **ORTHO-CLINICAL DIAGNOSTICS, INC.** [US/US]; 1001 US Highway 202, Raritan, NJ 08869 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors: **WAN, Jackson**; 10929 Corte Luz Del Sol, San Diego, CA 92130 (US). **WANG, Yixin**; 12511 El Camino Real, Unit E, San Diego, CA 92130 (US).
(74) Agents: **PELTO, Don** et al.; McKenna & Cuneo LLP, 1900 K Street NW, Washington, DC 20006 (US).

(54) Title: **EXPRESSION PROFILES AND METHODS OF USE**

(57) **Abstract:** The present invention relates to gene expression profiles, algorithms to generate gene expression profiles, microarrays comprising nucleic acid sequences representing gene expression profiles, methods of using gene expression profiles and microarrays, and business methods directed to the use of gene expression profiles, microarrays, and algorithms. The present invention further relates to protein expression profiles, algorithms to generate protein expression profiles, microarrays comprising protein-capture agents that bind proteins comprising protein expression profiles, methods of using protein expression profiles and microarrays, and business methods directed to the use of protein expression profiles, microarrays, and algorithms.



WO 02/074979 A2

EXPRESSION PROFILES AND METHODS OF USE

CROSS REFERENCE TO RELATED APPLICATIONS

The present application is related to and claims, under 35 U.S.C. § 119(e), the benefit
5 of U.S. Provisional Patent Application Serial No. 60/276,947, filed 20 March 2001, which is
incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates to gene expression profiles, algorithms to generate gene
10 expression profiles, microarrays comprising nucleic acid sequences representing gene
expression profiles, methods of using gene expression profiles and microarrays, and business
methods directed to the use of gene expression profiles, microarrays, and algorithms.

The present invention further relates to protein expression profiles, algorithms to
generate protein expression profiles, microarrays comprising protein-capture agents that bind
15 proteins comprising protein expression profiles, methods of using protein expression profiles
and microarrays, and business methods directed to the use of protein expression profiles,
microarrays, and algorithms.

BACKGROUND OF THE INVENTION

20 The identification and analysis of a particular gene or protein generally has been
accomplished by experiments directed specifically towards that gene or protein. With the
recent advances, however, in the sequencing of the human genome, the challenge is to
decipher the expression, function, and regulation of thousands of genes, which cannot be
realistically accomplished by analyzing one gene or protein at a time. To address this
25 situation, DNA microarray technology has proven to be a valuable tool. By taking advantage
of the sequence information obtained from DNA microarrays, the expression and functional
relationship of thousands of genes may be resolved.

The expression profiles of thousands of genes have been examined *en masse* via
cDNA and oligonucleotide microarrays. *See, e.g.,* Lockhart et al., NUCLEIC ACIDS SYMP.
30 SER. 11-12 (1998); Shalon et al., 46 PATHOL. BIOL. 107-109 (1998); Schena et al., 16 TRENDS
BIOTECHNOL. 301-306 (1998). Several studies have analyzed gene expression profiles in
yeast, mammalian cell lines, and disease tissues. *See, e.g.,* Welford et al., 26 NUCLEIC ACIDS
RES. 3059-3065 (1998); Cho et al., 2 MOL. CELL 65-73 (1997); Heller et al., 94 PROC. NATL.

ACAD. SCI. USA 2150-2155 (1997); Schena et al., 93 PROC. NATL. ACAD. SCI. USA 10614-10619 (1996).

Microarray technology provides the means to decipher the function of a particular gene based on its expression profile and alterations in its expression levels. In addition, this
5 technology may be used to define the components of cellular pathways as well as the regulation of these cellular components. High-density oligonucleotide microarrays may be used to simultaneously monitor thousands of genes or possibly entire genomes (*e.g.*, *Saccharomyces cerevisiae*).

Microarrays may also be used for genetic and physical mapping of genomes, DNA
10 sequencing, genetic diagnosis, and genotyping of organisms. Microarrays may be used to determine a medical diagnosis. For example, the identity of a pathogenic microorganism may be established unambiguously by hybridizing a patient sample to a microarray containing the genes from many types of known pathogenic DNA. A similar technique may also be used for genotyping an organism. For genetic diagnostics, a microarray may contain
15 multiple forms of a mutated gene or multiple genes associated with a particular disease. The microarray may then be probed with DNA or RNA, isolated from a patient sample (*e.g.*, blood sample), which may hybridize to one of the mutated or disease genes.

Microarrays containing molecular expression markers or predictor genes may be used to confirm tissue or cell identifications. In addition, disease progression may be monitored
20 by analyzing the expression patterns of the predictor genes in disease tissues. An alteration in gene expression may be used to define the specific disease state and stage of the disease. Monitoring the efficacy of certain drug regimens may also be accomplished by analyzing the expression patterns of the predictor genes. For example, decreases or increases in gene expression may be indicative of the efficacy of a particular drug.

Generally, oligonucleotide probes are used to detect complementary nucleic acid
25 sequences in a particular tissue or cell type. The oligonucleotide probes may be covalently attached to a support, and arrays of oligonucleotide probes immobilized on solid supports are used to detect specific nucleic acid sequences. To assess gene expression in a given tissue or cell sample, DNA or RNA is isolated from the tissue or cell, labeled with a fluorescent dye,
30 and then hybridized to the DNA microarray. The microarray may contain hundreds to thousands of DNA sequences selected from cDNA libraries, genomic DNA, or expressed sequence tags (ESTs). These DNA sequences may be spotted or synthesized onto the support and then crosslinked to the support by ultraviolet radiation. Following hybridization, the

fluorescence intensities of the microarray are analyzed, and these measurements are then used to determine the presence or relative quantity of a particular gene within the sample. This hybridization pattern is used to generate a gene expression profile of the target tissue or cell type.

Thus, differences in gene expression profiles may be used to identify the pathology of many diseases involving alterations of gene expression. The types of genes and their expression levels may distinguish normal tissue and diseased tissue. For example, cancer cells evolve from normal cells into highly invasive, metastatic malignancies, which frequently are induced by activation of oncogenes, or inactivation of tumor suppressor genes.

Differentially expressed sequences can serve as markers or predictors of the transformed state and are, therefore, of potential value in the diagnosis and classification of tumors. The assessment of expression profiles may provide meaningful information with respect to tumor type and stage, treatment methods, and prognosis.

SUMMARY OF THE INVENTION

The present invention relates to gene expression profiles, algorithms to generate gene expression profiles, microarrays comprising nucleic acid sequences representing gene expression profiles, methods of using gene expression profiles and microarrays, and business methods directed to the use of gene expression profiles, microarrays, and algorithms.

In a specific embodiment of the present invention, the gene expression profile may be an endothelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO: 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

In another embodiment of the present invention, the gene expression profile may be a muscle cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

In an alternative embodiment of the present invention, the gene expression profile may be a primary cell gene expression profile comprising one or more nucleic acid sequences or complementary sequences thereof, or portions of said nucleic acid sequences or

complementary sequences thereof, selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43; SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO: 59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID NO: 63; SEQ ID NO: 64; SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 79; SEQ ID NO: 80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID NO: 83; SEQ ID NO: 84; SEQ ID NO: 85; SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO: 88; SEQ ID NO: 89; SEQ ID NO: 90; SEQ ID NO: 91; SEQ ID NO: 92; SEQ ID NO: 93; SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID NO: 96; SEQ ID NO: 97; SEQ ID

NO: 98; SEQ ID NO: 99; SEQ ID NO: 100; SEQ ID NO: 101; SEQ ID NO: 102; SEQ ID
 NO: 103; SEQ ID NO: 104; SEQ ID NO: 105; SEQ ID NO: 106; SEQ ID NO: 107; SEQ ID
 NO: 108; SEQ ID NO: 109; SEQ ID NO: 110; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID
 NO: 113; SEQ ID NO: 114; SEQ ID NO: 115; SEQ ID NO: 116; SEQ ID NO: 118; SEQ ID
 5 NO: 119; SEQ ID NO: 120; SEQ ID NO: 121; SEQ ID NO: 122; SEQ ID NO: 123; SEQ ID
 NO: 124; SEQ ID NO: 125; SEQ ID NO: 126; SEQ ID NO: 127; SEQ ID NO: 128; SEQ ID
 NO: 129; SEQ ID NO: 130; SEQ ID NO: 131; SEQ ID NO: 132; SEQ ID NO: 133; SEQ ID
 NO: 134; SEQ ID NO: 135; SEQ ID NO: 136; SEQ ID NO: 137; SEQ ID NO: 138; SEQ ID
 NO: 139; SEQ ID NO: 140; SEQ ID NO: 141; SEQ ID NO: 142; SEQ ID NO: 143; SEQ ID
 10 NO: 144; SEQ ID NO: 145; SEQ ID NO: 146; SEQ ID NO: 147; SEQ ID NO: 148; SEQ ID
 NO: 149; SEQ ID NO: 150; SEQ ID NO: 151; SEQ ID NO: 152; SEQ ID NO: 153; SEQ ID
 NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID
 NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID
 NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID
 15 NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID
 NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID
 NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID
 NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

With regard to this gene expression profile, the present invention provides a
 20 microarray comprising one or more protein-capture agents that specifically bind to all or a
 portion of one or more of the proteins encoded by the genes comprising the gene expression
 profile.

In a further aspect of the present invention, the gene expression profile may be
 an epithelial cell gene expression profile comprising one or more nucleic acid sequences or
 25 complementary sequences thereof, or portions of said nucleic acid sequences or
 complementary sequences thereof, selected from the group consisting of SEQ ID NO: 47;
 SEQ ID NO: 60; SEQ ID NO: 67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ
 ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID
 NO: 99; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID
 30 NO: 131; SEQ ID NO: 150; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID
 NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID
 NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID
 NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID

NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186. With regard to this gene expression profile, the present invention provides a
5 microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

In yet another embodiment, a keratinocyte epithelial cell gene expression profile may comprise one or more nucleic acid sequences or complementary sequences thereof, or
10 portions of said nucleic acid sequences or complementary sequences thereof, selected from the group consisting of SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO:
15 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; and SEQ ID NO: 211. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

20 The present invention also provides a mammary epithelial cell gene expression profile comprising one or more nucleic acid sequences or complementary sequences thereof, or portions of said nucleic acid sequences or complementary sequences thereof, selected from the group consisting of SEQ ID NO: 78; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 239; SEQ ID NO:
25 271; SEQ ID NO: 285; and SEQ ID NO: 289. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

In an alternative embodiment, a bronchial epithelial cell gene expression profile may
30 comprise one or more nucleic acid sequences or complementary sequences thereof, or portions of said nucleic acid sequences or complementary sequences thereof, selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 169; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO:

241; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

The present invention also provides a prostate epithelial cell gene expression profile, which may comprise one or more nucleic acid sequences or complementary sequences thereof, or portions of said nucleic acid sequences or complementary sequences thereof, selected from the group consisting of SEQ ID NO: 64; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID NO: 320. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

In yet another embodiment, a renal cortical epithelial cell gene expression profile may comprise one or more nucleic acid sequences or complementary sequences thereof, or portions of said nucleic acid sequences or complementary sequences thereof, selected from the group consisting of SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 104; SEQ ID NO: 123; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 219; SEQ ID NO: 267; SEQ ID NO: 270; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 283; SEQ ID NO: 291; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 325; SEQ ID NO: 326; and SEQ ID NO: 327. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

The present invention further provides a renal proximal tubule epithelial cell gene expression profile comprising one or more nucleic acid sequences or complementary sequences thereof, or portions of said nucleic acid sequences or complementary sequences thereof, selected from the group consisting of SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID

NO: 309; SEQ ID NO: 311; SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

In a specific embodiment, a small airway epithelial cell gene expression profile may comprise one or more nucleic acid sequences or complementary sequences thereof, or portions of said nucleic acid sequences or complementary sequences thereof, selected from the group consisting of SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

The present invention also provides a renal epithelial cell gene expression profile comprising one or more nucleic acid sequences or complementary sequences thereof, or portions of said nucleic acid sequences or complementary sequences thereof, selected from the group consisting of SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324. With regard to this gene expression profile, the present invention provides a microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile.

In yet another embodiment of the present invention, the gene expression profiles may comprise one or more genes, wherein said gene expression profile is generated from a cell type selected from the group comprising coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular

endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery
 5 smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

In another embodiment of the present invention, the microarray may be a microarray comprising an endothelial cell gene expression profile comprising one or more nucleic acid
 10 sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ
 15 ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO: 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144.

The microarrays of the present invention may also comprise a microarray comprising a muscle cell gene expression profile comprising one or more nucleic acid sequences
 20 substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID
 25 NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69.

Also within the scope of the present invention are microarrays comprising a primary cell gene expression profile comprising one or more nucleic acid sequences substantially
 30 homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO:

16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21;
SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ
ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID
NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO:
5 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43;
SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ
ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID
NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO:
59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID NO: 63; SEQ ID NO: 64;
10 SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ
ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID
NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 79; SEQ ID NO:
80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID NO: 83; SEQ ID NO: 84; SEQ ID NO: 85;
SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO: 88; SEQ ID NO: 89; SEQ ID NO: 90; SEQ
15 ID NO: 91; SEQ ID NO: 92; SEQ ID NO: 93; SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID
NO: 96; SEQ ID NO: 97; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 100; SEQ ID NO:
101; SEQ ID NO: 102; SEQ ID NO: 103; SEQ ID NO: 104; SEQ ID NO: 105; SEQ ID NO:
106; SEQ ID NO: 107; SEQ ID NO: 108; SEQ ID NO: 109; SEQ ID NO: 110; SEQ ID NO:
111; SEQ ID NO: 112; SEQ ID NO: 113; SEQ ID NO: 114; SEQ ID NO: 115; SEQ ID NO:
20 116; SEQ ID NO: 118; SEQ ID NO: 119; SEQ ID NO: 120; SEQ ID NO: 121; SEQ ID NO:
122; SEQ ID NO: 123; SEQ ID NO: 124; SEQ ID NO: 125; SEQ ID NO: 126; SEQ ID NO:
127; SEQ ID NO: 128; SEQ ID NO: 129; SEQ ID NO: 130; SEQ ID NO: 131; SEQ ID NO:
132; SEQ ID NO: 133; SEQ ID NO: 134; SEQ ID NO: 135; SEQ ID NO: 136; SEQ ID NO:
137; SEQ ID NO: 138; SEQ ID NO: 139; SEQ ID NO: 140; SEQ ID NO: 141; SEQ ID NO:
25 142; SEQ ID NO: 143; SEQ ID NO: 144; SEQ ID NO: 145; SEQ ID NO: 146; SEQ ID NO:
147; SEQ ID NO: 148; SEQ ID NO: 149; SEQ ID NO: 150; SEQ ID NO: 151; SEQ ID NO:
152; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO:
157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO:
162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO:
30 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO:
172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO:
177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO:
182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

In a further embodiment, the microarray may be a microarray comprising an epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group

5 consisting of SEQ ID NO: 47; SEQ ID NO: 60; SEQ ID NO: 67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159;
10 SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184;
15 SEQ ID NO: 185; and SEQ ID NO: 186.

In yet another embodiment, a microarray may comprise a keratinocyte epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group

20 consisting of SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; and
25 SEQ ID NO: 211.

The present invention also provides a microarray comprising a mammary epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group

30 consisting of SEQ ID NO: 78; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 239; SEQ ID NO: 271; SEQ ID NO: 285; and SEQ ID NO: 289.

In an alternative embodiment, a microarray may comprise a bronchial epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 169; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 241; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314.

The present invention also provides a microarray comprising a prostate epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 64; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID NO: 320.

In yet another embodiment, a microarray comprises a renal cortical epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 104; SEQ ID NO: 123; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 219; SEQ ID NO: 267; SEQ ID NO: 270; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 283; SEQ ID NO: 291; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 325; SEQ ID NO: 326; and SEQ ID NO: 327.

The present invention further provides a microarray comprising a renal proximal tubule epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 311;

SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329.

In a specific embodiment, a microarray may comprise a small airway epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially
 5 homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ
 10 ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ
 15 ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319.

The present invention also provides a microarray comprising a renal epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group
 20 consisting of SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324.

In yet another embodiment, a microarray may comprise one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof,
 25 selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 37; SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 64; SEQ ID NO: 70; SEQ ID NO: 78; SEQ ID NO: 104; SEQ ID NO: 106; SEQ ID NO: 123; SEQ ID NO: 131; SEQ ID NO: 138; SEQ ID NO: 150; SEQ ID NO: 158; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 169; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 187; SEQ ID NO: 188; SEQ
 30 ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ

ID NO: 209; SEQ ID NO: 210; SEQ ID NO: 211; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 216; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 219; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 228; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 236; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 239; SEQ ID NO: 240; SEQ ID NO: 241; SEQ ID NO: 242; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 250; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 253; SEQ ID NO: 254; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 257; SEQ ID NO: 258; SEQ ID NO: 259; SEQ ID NO: 260; SEQ ID NO: 261; SEQ ID NO: 262; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 266; SEQ ID NO: 267; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 271; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 277; SEQ ID NO: 278; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 283; SEQ ID NO: 284; SEQ ID NO: 285; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 288; SEQ ID NO: 289; SEQ ID NO: 290; SEQ ID NO: 291; SEQ ID NO: 293; SEQ ID NO: 294; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 298; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 302; SEQ ID NO: 303; SEQ ID NO: 304; SEQ ID NO: 305; SEQ ID NO: 306; SEQ ID NO: 307; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 310; SEQ ID NO: 311; SEQ ID NO: 312; SEQ ID NO: 313; SEQ ID NO: 314; SEQ ID NO: 315; SEQ ID NO: 316; SEQ ID NO: 317; SEQ ID NO: 318; SEQ ID NO: 320; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 323; SEQ ID NO: 324; SEQ ID NO: 325; SEQ ID NO: 326; SEQ ID NO: 327; SEQ ID NO: 328; and SEQ ID NO: 329.

In another embodiment, the present invention provides a microarray comprising a gene expression profile comprising one or more genes or oligonucleotide probes obtained therefrom, wherein said gene expression profile is generated from a cell type selected from the group comprising coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal

fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

This invention also relates to methods of doing business comprising the steps of
5 determining the level of RNA expression for an RNA sample, wherein the RNA sample is amplified, fluorescently labeled, and hybridized to a microarray containing a plurality of nucleic acid sequences, and wherein the microarray is scanned for fluorescence; normalizing the expression levels using an algorithm, and scoring the RNA sample against a gene expression profile database. In one embodiment, the RNA sample is obtained from a patient
10 and the patient sample includes, but is not limited to, blood, amniotic fluid, plasma, semen, bone marrow, and tissue biopsy.

In another aspect of this method, the algorithm is either the MaxCor algorithm or the Mean Log Ratio algorithm. The invention described herein further provides algorithms useful for generating gene expression profiles. Specifically, the present invention provides
15 for either the MaxCor algorithm or the Mean Log Ratio algorithm to generate a gene expression profile.

The present invention also relates to a method of constructing a gene expression profile comprising the steps of hybridizing prepared RNA samples to a microarray containing a plurality of known nucleic acid sequences representing genes of a particular organism;
20 obtaining an expression level for each gene on a microarray; and normalizing the expression level for each gene on a microarray to control standards.

In a further aspect, the method of constructing a gene expression profile comprises the steps applying an algorithm to each of the normalized gene expression levels; performing a correlation analysis for all normalized gene expression microarrays within a group of
25 samples; establishing a gene expression profile using a signature extraction algorithm; and validating the gene expression profile.

In one embodiment, the algorithm of the profile construction method is the MaxCor algorithm. Specifically, the MaxCor algorithm is used to generate a numeric value that is assigned to each gene based upon the expression level contained on the microarray. In one
30 embodiment, the numeric value is between the range of (-1,+1). In particular, a negative numeric value represents a gene with relatively lower expression; a zero numeric value represents no relative gene expression difference; and a positive numeric value represents a gene with relatively higher expression.

In one embodiment, the numeric value is between the range of $(-2,+2)$. In particular, a negative numeric value represents a gene with relatively lower expression; a zero numeric value represents no relative gene expression difference; and a positive numeric value represents a gene with relatively higher expression.

5 In another embodiment, the algorithm of the profile construction method is the Mean Log Ratio algorithm. Specifically, the Mean Log Ratio algorithm is used to generate a numeric value that is assigned to each gene based upon the expression level contained on the microarray. In one embodiment, the numeric value is between the range of $(-1,+1)$. In particular, a negative numeric value represents a gene with relatively lower expression; a zero
10 numeric value represents no relative gene expression difference; and a positive numeric value represents a gene with relatively higher expression.

In one embodiment, the numeric value is between the range of $(-2,+2)$. In particular, a negative numeric value represents a gene with relatively lower expression; a zero numeric value represents no relative gene expression difference; and a positive numeric value
15 represents a gene with relatively higher expression.

The present invention further provides a method, in a computer system, for constructing and analyzing a gene expression profile comprising the steps of inputting gene expression data for each of a plurality of genes; normalizing expression data by transforming said data into log ratio values; filtering weak differential values; applying an algorithm to
20 each of said normalized gene expression values; performing a classification analysis for all normalized gene expression values; establishing a gene expression profile; and validating the gene expression profile. The algorithm may be the MaxCor algorithm or the Mean Log Ratio algorithm.

This invention is also related to computer programs for constructing and analyzing a
25 gene expression signature. These computer programs may comprise computer code that receives as input gene expression data for a plurality of genes; computer code that normalizes expression data by transforming the data into log ratio values; computer code that applies an algorithm to each of the normalized gene expression values; computer code that performs a correlation analysis for the normalized gene expression values; computer code that
30 establishes and validates the gene expression profile; and computer readable medium that stores computer code. The computer program may utilize the MaxCor algorithm or the Mean Log Ratio algorithm for gene expression profile analysis.

The present invention also provides methods for identifying the phenotype of an unknown cell. This method comprises applying an algorithm to extract a gene expression profile from gene expression data generated from the cell; and matching the gene expression profile to a gene expression profile generated from a cell of known phenotype. In one
5 embodiment, the algorithm is the MaxCor algorithm. In an alternative embodiment, the algorithm is the Mean Log Ratio algorithm.

In a particular embodiment, the application of an algorithm to extract a gene expression profile comprises setting a cutoff value for expression relative to normalized values, wherein said cutoff value is at least about two-fold induction above the normalized
10 values. Moreover, the matching step may be performed using a database comprising one or more gene expression profiles generated from cells of known phenotype.

The present invention further provides methods for distinguishing cell types comprising using an algorithm to generate a gene expression profile from a biological sample; and matching said generated gene expression profile to a gene expression profile of a
15 specific cell type. In one embodiment, the algorithm is the MaxCor algorithm. In an alternative embodiment, the algorithm is the Mean Log Ratio algorithm.

In a further embodiment, the specific cell type is selected from the group consisting of coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium,
20 myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary
25 artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

In a specific embodiment, the present invention provides a method for determining the phenotype of a cell comprising the steps of applying an algorithm to extract a protein expression profile from protein expression data generated from the cell and matching the
30 protein expression profile to a protein expression profile generated from a cell of known phenotype.

In one embodiment, the algorithm is the MaxCor algorithm. In an alternative embodiment, the algorithm is the Mean Log Ratio algorithm. In yet another embodiment, the

applying step comprises setting a cutoff value for expression relative to normalized values, wherein said cutoff value is at least about two-fold induction above the normalized values. In yet another embodiment, the matching step is performed using a database comprising one or more protein expression profiles generated from cells of known phenotype.

5 The present invention provides a method for distinguishing cell types comprising the step of matching a protein expression profile generated from a biological sample using an algorithm to a known protein expression profile of a specific cell type. In one embodiment, the algorithm is the MaxCor algorithm. In an alternative embodiment, the algorithm is the Mean Log Ratio algorithm.

10 In a further embodiment, the specific cell type is selected from the group consisting of coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule
15 epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

20 BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1. Laser capture microdissection (LCM) of 10 μ m Nissl-stained sections of adult rat large and small dorsal root ganglion (DRG) neurons. The arrows indicate DRG neurons to be captured (top panel). The middle and bottom panels show successful capture
25 and film transfer respectively.

Figure 2a-2b. Microarray of cDNA expression patterns of small (S) and large (L) neurons. Figure 2a is an example of the cDNA microarray data obtained. Boxed in white is an identical region of the microarray for L1 and S1 samples that is enlarged (shown directly below). In Figure 2b, scatter plots are shown that demonstrate the correlation between
30 independent amplifications of S1 vs. S2, S1 vs. S3, L1 vs. L2, and L (L1 and L2) vs. S (S1, S2, and S3).

Figure 3. Preferentially expressed mRNAs identified in small DRG neurons. The ratio value describes the mean fluorescence intensity ratio of the small DRG neurons as compared to the large DRG neurons.

Figure 4. Preferentially expressed mRNAs identified in large DRG neurons. The ratio value describes the mean fluorescence intensity ratio of the large DRG neurons as compared to the small DRG neurons.

Figure 5. Representative fields of *in situ* hybridization of rat DRG with selected cDNAs. The sections were Nissl-counterstained. The left panel shows results with radiolabeled probes encoding neurofilament-high (NF-H), neurofilament-low (NF-L) and β -1 subunit of the voltage-gated sodium channel (SCN β -1). Arrows in the left panel denote identifiable small neurons. The right panel shows representative fields from radiolabeled probes encoding calcitonin gene-related product (CGRP), voltage-gated sodium channel (NaN), and phospholipase C delta-4 (PLC). Arrows in the right panel denote identifiable large neurons. The large arrowhead denotes a large neuron which is also labeled.

Figures 6. *In situ* hybridization of selected cDNAs identified in small DRG neurons and large DRG neurons. Based on quantitative measurements comparing the overall intensity of signal in small and large neurons and the percentage of cells labeled within the total population of either small or large neurons, the preferential expression of these mRNAs was demonstrated.

Figure 7. Profile extraction analysis of several primary cell types. Clustering analysis of the gene expression profiles of the primary cell samples confirmed that these cell types could be classified into three groups: endothelial, epithelial, and muscle cell.

Figure 8. Cluster analysis of the 30 gene expression vectors using the hclust algorithm in the S-plus statistical package (MathSoft, Inc., Cambridge, MA). The hclust algorithm groups together primary cells with similar gene expression patterns. The three sample groups (endothelial, epithelial, and muscle cells) were easily separated.

Figure 9a-9t. The gene expression profile of human primary cells. The profile represents 459 genes identified from 30 primary cell types. The sequence source (Seq. Source) is the gene database (GB: GenBank; INCYTE: Incyte Genomes) from which the sequence was selected. The endothelial, epithelial, and muscle profile values are the numeric representation of the specific profile. The p-value is based on the Kruskal-Wallis rank test in which smaller p-values represent clones with higher discriminate power for classifying samples. The source description identifies the particular gene.

Figure 10a-10c. The gene expression profile of endothelial cells. The sequence source (Seq. Source) is the gene database (GB: GenBank; INCYTE: Incyte Genomes) from which the sequence was selected. The endothelial, epithelial, and muscle profile values are the numeric representation of the specific profile. The p-value is based on the Kruskal-Wallis rank test in which smaller p-values represent clones with higher discriminate power for classifying samples. The source description identifies the particular gene.

Figure 11a-11c. The gene expression profile of epithelial cells. The sequence source (Seq. Source) is the gene database (GB: GenBank; INCYTE: Incyte Genomes) from which the sequence was selected. The endothelial, epithelial, and muscle profile values are the numeric representation of the specific profile. The p-value is based on the Kruskal-Wallis rank test in which smaller p-values represent clones with higher discriminate power for classifying samples. The source description identifies the particular gene.

Figure 12a-12b. The gene expression profile of muscle cells. The sequence source (Seq. Source) is the gene database (GB: GenBank; INCYTE: Incyte Genomes) from which the sequence was selected. The endothelial, epithelial, and muscle profile values are the numeric representation of the specific profile. The p-value is based on the Kruskal-Wallis rank test in which smaller p-values represent clones with higher discriminate power for classifying samples. The source description identifies the particular gene.

Figure 13. The profile vectors (endothelial, epithelial, and muscle) generated by using the Mean Log Ratio and MaxCor algorithms are plotted graphically. The numbers are plotted according to the color bar. Numbers in the middle are plotted with colors in between as indicated.

Figure 14. Self-validation analysis using the Mean Log Ratio algorithm. Each of the 30 samples was scored against the three expression profiles generated by using all 30 samples. The scores are plotted on the bar chart (white – endothelial, black – epithelial, hatched – muscle). The order of the primary cells is listed in Figure 7.

Figure 15. Omit-one analysis using the Mean Log Ratio algorithm. Each of the 30 samples was scored against the three expression profiles generated by using all but the sample omitted. The scores are plotted on the bar chart (white – endothelial, black – epithelial, hatched – muscle). The order of the primary cells is listed on Figure 7.

Figure 16. Self-validation analysis using the MaxCor algorithm. Each of the 30 samples were scored against the three expression profiles generated by using all 30 samples.

The scores are plotted on the bar chart (white – endothelial, black – epithelial, hatched – muscle). The order of the primary cells is listed on Figure 7.

Figure 17. Omit-one analysis using the MaxCor algorithm. Each of the 30 samples was scored against the three expression profiles generated by using all but the sample omitted. The scores are plotted on the bar chart (white – endothelial, black – epithelial, hatched – muscle). The order of the primary cells is listed on Figure 7.

Figure 18a-18f. Gene expression profiles of epithelial cell lines derived from keratinocyte epithelium, mammary epithelium, bronchial epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, and renal epithelium. The data is sorted from highest relative expression to lowest relative expression for keratinocyte epithelial cells.

DETAILED DESCRIPTION OF THE INVENTION

It is to be understood that this invention is not limited to the particular methodology, protocols, cell lines, animal species or genera, constructs, or reagents described and as such may vary. It is also to be understood that the terminology used herein is for the purpose of describing particular embodiments only, and is not intended to limit the scope of the present invention which will be limited only by the appended claims.

It must be noted that as used herein and in the appended claims, the singular forms “a,” “an,” and “the” include plural reference unless the context clearly dictates otherwise. Thus, for example, reference to “a protein” is a reference to one or more proteins and includes equivalents thereof known to those skilled in the art, and so forth.

Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood to one of ordinary skill in the art to which this invention belongs. Although any methods, devices, and materials similar or equivalent to those described herein can be used in the practice or testing of the invention, the preferred methods, devices and materials are now described.

All publications and patents mentioned herein are hereby incorporated by reference for the purpose of describing and disclosing, for example, the constructs and methodologies that are described in the publications which might be used in connection with the presently described invention. The publications discussed above and throughout the text are provided solely for their disclosure prior to the filing date of the present application. Nothing herein is

to be construed as an admission that the inventors are not entitled to antedate such disclosure by virtue of prior invention.

DEFINITIONS

5 For convenience, the meaning of certain terms and phrases employed in the specification, examples, and appended claims are provided below. The definitions are not meant to be limiting in nature and serve to provide a clearer understanding of certain aspects of the present invention.

The term “genome” is intended to include the entire DNA complement of an
10 organism, including the nuclear DNA component, chromosomal or extrachromosomal DNA, as well as the cytoplasmic domain (*e.g.*, mitochondrial DNA).

The term “gene” refers to a nucleic acid sequence that comprises control and coding sequences necessary for producing a polypeptide or precursor. The polypeptide may be encoded by a full length coding sequence or by any portion of the coding sequence. The gene
15 may be derived in whole or in part from any source known to the art, including a plant, a fungus, an animal, a bacterial genome or episome, eukaryotic, nuclear or plasmid DNA, cDNA, viral DNA, or chemically synthesized DNA. A gene may contain one or more modifications in either the coding or the untranslated regions that could affect the biological activity or the chemical structure of the expression product, the rate of expression, or the
20 manner of expression control. Such modifications include, but are not limited to, mutations, insertions, deletions, and substitutions of one or more nucleotides. The gene may constitute an uninterrupted coding sequence or it may include one or more introns, bound by the appropriate splice junctions.

The term “gene expression” refers to the process by which a nucleic acid sequence
25 undergoes successful transcription and translation such that detectable levels of the nucleotide sequence are expressed.

The terms “gene expression profile” or “gene expression signature” refer to a group of genes representing a particular cell or tissue type (*e.g.*, neuron, coronary artery endothelium, or disease tissue).

30 The term “nucleic acid” as used herein, refers to a molecule comprised of one or more nucleotides, *i.e.*, ribonucleotides, deoxyribonucleotides, or both. The term includes monomers and polymers of ribonucleotides and deoxyribonucleotides, with the ribonucleotides and/or deoxyribonucleotides being bound together, in the case of the

polymers, via 5' to 3' linkages. The ribonucleotide and deoxyribonucleotide polymers may be single or double-stranded. However, linkages may include any of the linkages known in the art including, for example, nucleic acids comprising 5' to 3' linkages. The nucleotides may be naturally occurring or may be synthetically produced analogs that are capable of forming base-pair relationships with naturally occurring base pairs. Examples of non-naturally occurring bases that are capable of forming base-pairing relationships include, but are not limited to, aza and deaza pyrimidine analogs, aza and deaza purine analogs, and other heterocyclic base analogs, wherein one or more of the carbon and nitrogen atoms of the pyrimidine rings have been substituted by heteroatoms, *e.g.*, oxygen, sulfur, selenium, phosphorus, and the like. Furthermore, the term "nucleic acid sequences" contemplates the complementary sequence and specifically includes any nucleic acid sequence that is substantially homologous to the both the nucleic acid sequence and its complement.

The term "homology", as used herein, refers to a degree of complementarity. There may be partial homology or complete homology (*i.e.*, identity). A partially complementary sequence is one that at least partially inhibits an identical sequence from hybridizing to a target nucleic acid; it is referred to using the functional term "substantially homologous." The inhibition of hybridization of the completely complementary sequence to the target sequence may be examined using a hybridization assay (Southern or northern blot, solution hybridization and the like) under conditions of low stringency. A substantially homologous sequence or probe will compete for and inhibit the binding (*i.e.*, the hybridization) of a completely homologous sequence or probe to the target sequence under conditions of low stringency. This is not to say that conditions of low stringency are such that non-specific binding is permitted; low stringency conditions require that the binding of two sequences to one another be a specific (*i.e.*, selective) interaction. The absence of non-specific binding may be tested by the use of a second target sequence which lacks even a partial degree of complementarity (*e.g.*, less than about 30% identity); in the absence of non-specific binding, the probe will not hybridize to the second non-complementary target sequence.

The term "oligonucleotide" as used herein refers to a nucleic acid molecule comprising, for example, from about 10 to about 1000 nucleotides. Oligonucleotides for use in the present invention are preferably from about 15 to about 150 nucleotides, more preferably from about 150 to about 1000 in length. The oligonucleotide may be a naturally occurring oligonucleotide or a synthetic oligonucleotide. Oligonucleotides may be prepared by the phosphoramidite method (Beaucage and Carruthers, 22 TETRAHEDRON LETT. 1859-62

(1981)), or by the triester method (Matteucci et al., 103 J. AM. CHEM. SOC. 3185 (1981)), or by other chemical methods known in the art.

The terms “modified oligonucleotide” and “modified polynucleotide” as used herein refer to oligonucleotides or polynucleotides with one or more chemical modifications at the molecular level of the natural molecular structures of all or any of the bases, sugar moieties, internucleoside phosphate linkages, as well as to molecules having added substitutions or a combination of modifications at these sites. The internucleoside phosphate linkages may be phosphodiester, phosphotriester, phosphoramidate, siloxane, carbonate, carboxymethylester, acetamidate, carbamate, thioether, bridged phosphoramidate, bridged methylene phosphonate, phosphorothioate, methylphosphonate, phosphorodithioate, bridged phosphorothioate or sulfone internucleotide linkages, or 3'-3', 5'-3', or 5'-5' linkages, and combinations of such similar linkages. The phosphodiester linkage may be replaced with a substitute linkage, such as phosphorothioate, methylamino, methylphosphonate, phosphoramidate, and guanidine, and the ribose subunit of the nucleic acids may also be substituted (*e.g.*, hexose phosphodiester; peptide nucleic acids). The modifications may be internal (single or repeated) or at the end(s) of the oligonucleotide molecule, and may include additions to the molecule of the internucleoside phosphate linkages, such as deoxyribose and phosphate modifications which cleave or crosslink to the opposite chains or to associated enzymes or other proteins. The terms “modified oligonucleotides” and “modified polynucleotides” also include oligonucleotides or polynucleotides comprising modifications to the sugar moieties (*e.g.*, 3'-substituted ribonucleotides or deoxyribonucleotide monomers), any of which are bound together via 5' to 3' linkages.

“Biomolecular sequence,” as used herein, is a term that refers to all or a portion of a gene or nucleic acid sequence. A biomolecular sequence may also refer to all or a portion of an amino acid sequence.

The terms “array” and “microarray” refer to the type of genes or proteins represented on an array by oligonucleotides or protein-capture agents, and where the type of genes or proteins represented on the array is dependent on the intended purpose of the array (*e.g.*, to monitor expression of human genes or proteins). The oligonucleotides or protein-capture agents on a given array may correspond to the same type, category, or group of genes or proteins. Genes or proteins may be considered to be of the same type if they share some common characteristics such as species of origin (*e.g.*, human, mouse, rat); disease state (*e.g.*, cancer); functions (*e.g.*, protein kinases, tumor suppressors); same biological process (*e.g.*,

apoptosis, signal transduction, cell cycle regulation, proliferation, differentiation). For example, one array type may be a “cancer array” in which each of the array oligonucleotides or protein-capture agents correspond to a gene or protein associated with a cancer. An “epithelial array” may be an array of oligonucleotides or protein-capture agents
5 corresponding to unique epithelial genes or proteins. Similarly, a “cell cycle array” may be an array type in which the oligonucleotides or protein-capture agents correspond to unique genes or proteins associated with the cell cycle.

The term “cell type” refers to a cell from a given source (*e.g.*, a tissue, organ) or a cell in a given state of differentiation, or a cell associated with a given pathology or genetic
10 makeup.

The term “activation” as used herein refers to any alteration of a signaling pathway or biological response including, for example, increases above basal levels, restoration to basal levels from an inhibited state, and stimulation of the pathway above basal levels.

The term “differential expression” refers to both quantitative as well as qualitative
15 differences in the temporal and tissue expression patterns of a gene or a protein. For example, a differentially expressed gene may have its expression activated or completely inactivated in normal versus disease conditions. Such a qualitatively regulated gene may exhibit an expression pattern within a given tissue or cell type that is detectable in either control or disease conditions, but is not detectable in both. Differentially expressed genes
20 may represent “high information density genes,” “profile genes,” or “target genes.”

Similarly, a differentially expressed protein may have its expression activated or completely inactivated in normal versus disease conditions. Such a qualitatively regulated protein may exhibit an expression pattern within a given tissue or cell type that is detectable in either control or disease conditions, but is not detectable in both. Moreover, differentially
25 expressed genes may represent “high information density proteins,” “profile proteins,” or “target proteins.”

The term “detectable” refers to an RNA expression pattern which is detectable via the standard techniques of polymerase chain reaction (PCR), reverse transcriptase-(RT) PCR, differential display, and Northern analyses, which are well known to those of skill in the art.
30 Similarly, protein expression patterns may be “detected” via standard techniques such as Western blots.

The term “high information density” refers to a gene or protein whose expression pattern may be used as a predictor or diagnostic, may be used in methods for identifying

therapeutic compounds, drug or toxicity screening, or identifying cellular signal pathways or co-regulated genes. Identification of high information density genes or proteins is accomplished by assessing the information content of one or more genes or proteins comprising one or more gene or protein expression profiles. Genes or proteins providing the highest amount of information content comprise high information density genes or proteins. High information density genes may also be referred to as “predictor genes.” Similarly, high information density proteins may be referred to as “predictor proteins.”

The term “information content” refers to the value assigned to a particular gene or protein based on quantitative and qualitative expression under selected conditions.

Information content may be derived by measuring one or more parameters of gene or protein expression including, but not limited to, the cell type in which the gene or protein is expressed, the magnitude of response over time, and response to chemical or physical stimuli. Algorithms may be used in assessing the information content provided by particular genes or proteins.

A “target gene” refers to a nucleic acid, often derived from a biological sample, to which an oligonucleotide probe is designed to specifically hybridize. It is either the presence or absence of the target nucleic acid that is to be detected, or the amount of the target nucleic acid that is to be quantified. The target nucleic acid has a sequence that is complementary to the nucleic acid sequence of the corresponding probe directed to the target. The target nucleic acid may also refer to the specific subsequence of a larger nucleic acid to which the probe is directed or to the overall sequence (*e.g.*, gene or mRNA) whose expression level it is desired to detect.

A “target protein” refers to an amino acid or protein, often derived from a biological sample, to which a protein-capture agent specifically hybridizes or binds. It is either the presence or absence of the target protein that is to be detected, or the amount of the target protein that is to be quantified. The target protein has a structure that is recognized by the corresponding protein-capture agent directed to the target. The target protein or amino acid may also refer to the specific substructure of a larger protein to which the protein-capture agent is directed or to the overall structure (*e.g.*, gene or mRNA) whose expression level it is desired to detect.

The term “complementary” refers to the topological compatibility or matching together of the interacting surfaces of a probe molecule and its target. The target and its probe can be described as complementary, and furthermore, the contact surface

characteristics are complementary to each other. Hybridization or base pairing between nucleotides or nucleic acids, such as, for example, between the two strands of a double-stranded DNA molecule or between an oligonucleotide probe and a target are complementary.

5 The term “hybridization” refers to the binding, duplexing, or hybridizing of a nucleic acid molecule to a particular nucleic acid sequence under stringent conditions. Hybridization may also refer to the binding of a protein-capture agent to a target protein under certain conditions, such as normal physiological conditions.

10 The term “stringent conditions” refers to conditions under which a probe may hybridize to its target nucleic acid sequence, but to no other sequences. Stringent conditions are sequence-dependent (*e.g.*, longer sequences hybridize specifically at higher temperatures). Generally, stringent conditions are selected to be about 5°C lower than the thermal melting point (T_m) for the specific sequence at a defined ionic strength and pH. The T_m is the temperature (under defined ionic strength, pH, and nucleic acid concentration) at
15 which 50% of the probes complementary to the target sequence hybridize to the target sequence at equilibrium. Typically, stringent conditions will be those in which the salt concentration is at least about 0.01 to about 1.0 M sodium ion concentration (or other salts) at about pH 7.0 to about pH 8.3 and the temperature is at least about 30°C for short probes (*e.g.*, 10 to 50 nucleotides). Stringent conditions may also be achieved with the addition of
20 destabilizing agents such as formamide.

 The term “label” refers to agents that are capable of providing a detectable signal, either directly or through interaction with one or more additional members of a signal producing system. Labels that are directly detectable and may find use in the present invention include: fluorescent labels, where the wavelength of light absorbed by the
25 fluorophore may generally range from about 300 to about 900 nm, usually from about 400 to about 800 nm, and where the absorbance maximum may typically occur at a wavelength ranging from about 500 to about 800 nm. Specific fluorophores for use in singly labeled primers include: fluorescein, rhodamine, BODIPY, cyanine dyes and the like. Radioactive isotopes, such as ^{35}S , ^{32}P , ^3H , and the like may also be utilized as labels. Examples of labels
30 that provide a detectable signal through interaction with one or more additional members of a signal producing system include capture moieties that specifically bind to complementary binding pair members, where the complementary binding pair members comprise a directly detectable label moiety, such as a fluorescent moiety as described above. The label should be

such that it does not provide a variable signal, but instead provides a constant and reproducible signal over a given period of time. Capture moieties of interest include ligands (e.g., biotin) where the other member of the signal producing system could be fluorescently labeled streptavidin, and the like. The target molecules may be end-labeled, *i.e.*, the label moiety is present at a region at least proximal to, and preferably at, the 5' terminus of the target.

The term "oligonucleotide probe" refers to a surface-immobilized oligonucleotide that may be recognized by a particular target. Depending on context, the term "oligonucleotide probes" refers both to individual oligonucleotide molecules and to the collection of oligonucleotide molecules immobilized at a discrete location. Generally, the probe is capable of binding to a target nucleic acid of complementary sequence through one or more types of chemical bonds, usually through complementary base pairing via hydrogen bond formation. As used herein, an oligonucleotide probe may include natural (e.g., A, G, C, or T) or modified bases (e.g., 7-deazaguanosine, inosine). In addition, the bases in an oligonucleotide probe may be joined by a linkage other than a phosphodiester bond, so long as it does not interfere with hybridization. Thus, oligonucleotide probes may be peptide nucleic acids in which the constituent bases are joined by peptide bonds rather than phosphodiester linkages.

The term "protecting group" as used herein, refers to any of the groups which are designed to block one reactive site in a molecule while a chemical reaction is carried out at another reactive site. The proper selection of protecting groups for a particular synthesis may be governed by the overall methods employed in the synthesis. For example, in photolithography synthesis, discussed below, the protecting groups are photolabile protecting groups such as NVOC and MeNPOC. In other methods, protecting groups may be removed by chemical methods and include groups such as Fmoc, DMT, and others known to those of skill in the art.

The term "support" or "substrate" refers to material having a rigid or semi-rigid surface. Such materials may take the form of plates or slides, small beads, pellets, disks or other convenient forms, although other forms may be used. In some embodiments, at least one surface of the substrate will be substantially flat. In other embodiments, a roughly spherical shape may be preferred. In the microarrays of the present invention, the oligonucleotide probes or protein-capture agents (defined below) may be stably associated with the surface of a rigid support, *i.e.*, the probes maintain their position relative to the rigid support under hybridization and washing conditions. As such, the oligonucleotide probes or

protein-capture agents may be non-covalently or covalently associated with the support surface. Examples of non-covalent association include non-specific adsorption, specific binding through a specific binding pair member covalently attached to the support surface, and entrapment in a support material (*e.g.*, a hydrated or dried separation medium) which presents the oligonucleotide probe or protein-capture agent in a manner sufficient for hybridization to occur. Examples of covalent binding include covalent bonds formed between the oligonucleotide probe or protein-capture agent and a functional group present on the surface of the rigid support (*e.g.*, -OH) where the functional group may be naturally occurring or present as a member of an introduced linking group.

As mentioned above, the microarray may be present on a rigid substrate. By rigid, the support is solid and preferably does not readily bend. As such, the rigid substrates of the microarrays are sufficient to provide physical support and structure to the oligonucleotide probes or protein-capture agents present thereon under the assay conditions in which the microarray is utilized, particularly under high-throughput handling conditions.

The term “spatially directed oligonucleotide synthesis” refers to any method of directing the synthesis of an oligonucleotide to a specific location on a substrate.

The term “background” refers to hybridization signals resulting from non-specific binding, or other interactions, between the labeled target nucleic acids and components of the oligonucleotide microarray (*e.g.*, the oligonucleotide probes, control probes, the array substrate) or between target proteins and the protein-capture agents of a protein microarray. Background signals may also be produced by intrinsic fluorescence of the microarray components themselves. A single background signal may be calculated for the entire array, or a different background signal may be calculated for each target nucleic acid or target protein. The background may be calculated as the average hybridization signal intensity, or where a different background signal is calculated for each target gene or target protein. Alternatively, background may be calculated as the average hybridization signal intensity produced by hybridization to probes that are not complementary to any sequence found in the sample (*e.g.*, probes directed to nucleic acids of the opposite sense or to genes not found in the sample such as bacterial genes where the sample is mammalian nucleic acids). The background can also be calculated as the average signal intensity produced by regions of the array which lack any probes or protein-capture agents at all.

The term “cluster” refers to a group of nucleic acid sequences or amino acid sequences related to one another by sequence homology. In one example, clusters are formed

based upon a specified degree of homology and/or overlap (*e.g.*, stringency). "Clustering" may be performed with the nucleic acid or amino acid sequence data. For instance, a sequence thought to be associated with a particular molecular or biological function in one tissue might be compared against another library or database of sequences. This type of search is useful to look for homologous, and presumably functionally related, sequences in other tissues or samples, and may be used to streamline the methods of the present invention in that clustering may be used within one or more of the databases to cluster biomolecular sequences prior to performing methods of the invention. The sequences showing sufficient homology with the representative sequence are considered part of a "cluster." Such "sufficient" homology may vary within the needs of one skilled in the art.

The term "linker" refers to a moiety, molecule, or group of molecules attached to a solid support, and spacing an oligonucleotide or other nucleic acid fragment from the solid support.

The term "bead" refers to solid supports for use with the present invention. Such beads may have a wide variety of forms, including microparticles, beads, and membranes, slides, plates, micromachined chips, and the like. Likewise, solid supports of the invention may comprise a wide variety of compositions, including glass, plastic, silicon, alkanethiolate-derivatized gold, cellulose, low crosslinked and high crosslinked polystyrene, silica gel, polyamide, and the like. Other materials and shapes may be used, including pellets, disks, capillaries, hollow fibers, needles, solid fibers, cellulose beads, pore-glass beads, silica gels, polystyrene beads optionally crosslinked with divinylbenzene, grafted copoly beads, poly-acrylamide beads, latex beads, dimethylacrylamide beads optionally crosslinked with N,N-bis-acryloyl ethylene diamine, and glass particles coated with a hydrophobic polymer.

The term "biological sample" refers to a sample obtained from an organism (*e.g.*, patient) or from components (*e.g.*, cells) of an organism. The sample may be of any biological tissue or fluid. The sample may be a "clinical sample" which is a sample derived from a patient. Such samples include, but are not limited to, sputum, blood, blood cells (*e.g.*, white cells), amniotic fluid, plasma, semen, bone marrow, and tissue or fine needle biopsy samples, urine, peritoneal fluid, and pleural fluid, or cells therefrom. Biological samples may also include sections of tissues such as frozen sections taken for histological purposes. A biological sample may also be referred to as a "patient sample."

“Proteomics” is the study of or the characterization of either the proteome or some fraction of the proteome. The “proteome” is the total collection of the intracellular proteins of a cell or population of cells and the proteins secreted by the cell or population of cells. This characterization includes measurements of the presence, and usually quantity, of the proteins that have been expressed by a cell. The function, structural characteristics (such as post-translational modification), and location within the cell of the proteins may also be studied. “Functional proteomics” refers to the study of the functional characteristics, activity level, and structural characteristics of the protein expression products of a cell or population of cells.

A “protein” means a polymer of amino acid residues linked together by peptide bonds. The term, as used herein, refers to proteins, polypeptides, and peptides of any size, structure, or function. Typically, however, a protein will be at least six amino acids long. If the protein is a short peptide, it will be at least about 10 amino acid residues long. A protein may be naturally occurring, recombinant, or synthetic, or any combination of these. A protein may also comprise a fragment of a naturally occurring protein or peptide. A protein may be a single molecule or may be a multi-molecular complex. The term protein may also apply to amino acid polymers in which one or more amino acid residues is an artificial chemical analogue of a corresponding naturally occurring amino acid.

A “fragment of a protein,” as used herein, refers to a protein that is a portion of another protein. For example, fragments of proteins may comprise polypeptides obtained by digesting full-length protein isolated from cultured cells. In one embodiment, a protein fragment comprises at least about six amino acids. In another embodiment, the fragment comprises at least about ten amino acids. In yet another embodiment, the protein fragment comprises at least about 16 amino acids.

As used herein, an “expression product” is a biomolecule, such as a protein, which is produced when a gene in an organism is expressed. An expression product may comprise post-translational modifications.

The term “protein expression” refers to the process by which a nucleic acid sequence undergoes successful transcription and translation such that detectable levels of the amino acid sequence or protein are expressed.

The terms “protein expression profile” or “protein expression signature” refer to a group of proteins representing a particular cell or tissue type (*e.g.*, neuron, coronary artery endothelium, or disease tissue).

The term “protein-capture agent,” as used herein, refers to a molecule or a multi-molecular complex that can bind a protein to itself. In one embodiment, protein-capture agents bind their binding partners in a substantially specific manner. In one embodiment, protein-capture agents may exhibit a dissociation constant (K_D) of less than about 10^{-6} . The protein-capture agent may comprise a biomolecule such as a protein or a polynucleotide. The biomolecule may further comprise a naturally occurring, recombinant, or synthetic biomolecule. Examples of protein-capture agents include antibodies, antigens, receptors, or other proteins, or portions or fragments thereof. Furthermore, protein-capture agents are understood not to be limited to agents that only interact with their binding partners through noncovalent interactions. Rather, protein-capture agents may also become covalently attached to the proteins with which they bind. For example, the protein-capture agent may be photocrosslinked to its binding partner following binding.

A “region of protein-capture agents” is a term that refers to a discrete area of immobilized protein-capture agents on the surface of a substrate. The regions may be of any geometric shape or may be irregularly shaped.

As used herein, the term “binding partner” refers to a protein that may bind to a particular protein-capture agent. In one embodiment, the binding partner binds a protein-capture agent in a substantially specific manner. In some cases, the protein-capture agent may be a cellular or extracellular protein and the binding partner may be the entity normally bound *in vivo*. In other embodiments, however, the binding partner may be the protein or peptide on which the protein-capture agent was selected (through *in vitro* or *in vivo* selection) or raised (as in the case of antibodies). A binding partner may be shared by more than one protein-capture agent. For example, a binding partner that is bound by a variety of polyclonal antibodies may bear a number of different epitopes. One protein-capture agent may also bind to a multitude of binding partners, for example, if the binding partners share the same epitope.

A “population of cells in an organism” means a collection of more than one cell in a single organism or more than one cell originally derived from a single organism. The cells in the collection are preferably all of the same type. They may all be from the same tissue in an organism, for example. Most preferably, gene expression in all of the cells in the population is identical or nearly identical.

“Conditions suitable for protein binding” means those conditions (in terms of salt concentration, pH, detergent, protein concentration, temperature, etc.) that allow for binding

to occur between an immobilized protein-capture agent and its binding partner in solution. Preferably, the conditions are not so lenient that a significant amount of nonspecific protein binding occurs.

A “small molecule” comprises a compound or molecular complex, either synthetic,
5 naturally derived, or partially synthetic, composed of carbon, hydrogen, oxygen, and nitrogen, which may also contain other elements, and which may have a molecular weight of less than about 5,000, and in a specific embodiment between about 100 and about 1,500.

The term “antibody” means an immunoglobulin, whether natural or partially or wholly synthetically produced. All derivatives thereof that maintain specific binding ability
10 are also included in the term. The term also covers any protein having a binding domain that is homologous or largely homologous to an immunoglobulin binding domain. An antibody may be monoclonal or polyclonal. The antibody may be a member of any immunoglobulin class, including any of the human classes: IgG, IgM, IgA, IgD, and IgE.

The term “antibody fragment” refers to any derivative of an antibody that is less than
15 full-length. In one aspect, the antibody fragment retains at least a significant portion of the full-length antibody's specific binding ability, specifically, as a binding partner. Examples of antibody fragments include, but are not limited to, Fab, Fab', F(ab')₂, scFv, Fv, dsFv diabody, and Fd fragments. The antibody fragment may be produced by any means. For example, the antibody fragment may be enzymatically or chemically produced by fragmentation of an
20 intact antibody or it may be recombinantly produced from a gene encoding the partial antibody sequence. Alternatively, the antibody fragment may be wholly or partially synthetically produced. The antibody fragment may comprise a single chain antibody fragment. In another embodiment, the fragment may comprise multiple chains that are linked together, for example, by disulfide linkages. The fragment may also comprise a
25 multimolecular complex. A functional antibody fragment may typically comprise at least about 50 amino acids and more typically will comprise at least about 200 amino acids.

As used herein, single-chain Fvs (scFvs) refer to recombinant antibody fragments, consisting of the variable light chain (V_L) and variable heavy chain (V_H) covalently connected to one another by a polypeptide linker. Either V_L or V_H may be the NH₂-terminal
30 domain. The polypeptide linker may be of variable length and composition so long as the two variable domains are bridged without serious steric interference. Typically, the linkers are comprised primarily of stretches of glycine and serine residues with some glutamic acid or lysine residues interspersed for solubility.

“Diabodies” refer to dimeric scFvs. The components of diabodies generally have shorter peptide linkers than most scFvs and they show a preference for associating as dimers.

An “Fv” fragment consists of one V_H and one V_L domain held together by noncovalent interactions. The term “dsFv” is used herein to refer to an Fv with an engineered
5 intermolecular disulfide bond to stabilize the V_H-V_L pair.

The term “F(ab')₂” fragment refers to an antibody fragment essentially equivalent to that obtained from immunoglobulins by digestion with an enzyme pepsin at pH 4.0-4.5. The fragment may be recombinantly produced.

A “Fab” fragment is an antibody fragment essentially equivalent to that obtained by
10 reduction of the disulfide bridge or bridges joining the two heavy chain pieces in the F(ab')₂ fragment. The Fab' fragment may be recombinantly produced.

A “Fab” fragment is an antibody fragment essentially equivalent to that obtained by digestion of immunoglobulins with the enzyme papain. The Fab fragment may be recombinantly produced. The heavy chain segment of the Fab fragment is the Fd piece.

15 The term “coating” means a layer that is either naturally or synthetically formed on or applied to the surface of the substrate. For example, the exposure of a substrate, such as silicon, to air results in oxidation of the exposed surface. In the case of a substrate made of silicon, a silicon oxide coating is formed on the surface upon exposure to air. In other instances, the coating is not derived from the substrate and may be placed upon the surface
20 via mechanical, physical, electrical, or chemical means. An example of this type of coating would be a metal coating that is applied to a silicon or polymeric substrate or a silicon nitride coating that is applied to a silicon substrate. Although a coating may be of any thickness, typically the coating has a thickness smaller than that of the substrate.

An “interlayer” or “adhesion layer” refers to an additional coating or layer that is
25 positioned between the first coating and the substrate. Multiple interlayers may be used together. The primary purpose of a typical interlayer is to facilitate adhesion between the first coating and the substrate. One such example is the use of a titanium or chromium interlayer to help adhere a gold coating to a silicon or glass surface. However, other possible functions of an interlayer are also contemplated. For example, some interlayers may perform
30 a role in the detection system of the microarray, such as a semiconductor or metal layer between a nonconductive substrate and a nonconductive coating.

An “organic thinfilm” is a thin layer of organic molecules that has been applied to a substrate or to a coating on a substrate if present. An organic thinfilm may be less than about

20 nm thick. Alternatively, an organic thinfilm may be less than about 10 nm thick. An organic thinfilm may be disordered or ordered. For example, an organic thinfilm can be amorphous (such as a chemisorbed or spin-coated polymer) or highly organized (such as a Langmuir-Blodgett film or self-assembled monolayer). An organic thinfilm may be

5 heterogeneous or homogeneous. In one embodiment, the organic thinfilm is a monolayer. In another embodiment, the organic thinfilm comprises a lipid bilayer. In other embodiments, the organic thinfilm may comprise a combination of more than one form of organic thinfilm. For example, an organic thinfilm may comprise a lipid bilayer on top of a self-assembled monolayer. A hydrogel may also compose an organic thinfilm. The organic thinfilm may
10 have functionalities exposed on its surface that serve to enhance the surface conditions of a substrate or the coating on a substrate in any of a number of ways. For example, exposed functionalities of the organic thinfilm may be useful in the binding or covalent immobilization of the protein-capture agents to the regions of the protein microarray.

Alternatively, the organic thinfilm may bear functional groups, such as polyethylene glycol
15 (PEG), which reduce the non-specific binding of molecules to the surface. Other exposed functionalities serve to tether the thinfilm to the surface of the substrate or the coating. Particular functionalities of the organic thinfilm may also be designed to enable certain detection techniques to be used with the surface. Alternatively, the organic thinfilm may serve the purpose of preventing inactivation of a protein-capture agent or the protein binding
20 partner to be bound by a protein-capture agent from occurring upon contact with the surface of a substrate or a coating on the surface of a substrate.

A "monolayer" is a single-molecule thick organic thinfilm. A monolayer may be disordered or ordered. A monolayer may be a polymeric compound, such as a polynonionic polymer, a polyionic polymer, or a block-copolymer. For example, the monolayer may
25 comprise a poly amino acid such as polylysine. In another embodiment, the monolayer may be a self-assembled monolayer. One face of the self-assembled monolayer may comprise chemical functionalities on the termini of the organic molecules that are chemisorbed or physisorbed onto the surface of the substrate or, if present, the coating on the substrate. Examples of suitable functionalities of monolayers include the positively charged amino
30 groups of poly-L-lysine for use on negatively charged surfaces and thiols for use on gold surfaces. Generally, the other face of the self-assembled monolayer is exposed and may bear any number of chemical functionalities or end groups.

A “self-assembled monolayer” is a monolayer that is created by the spontaneous assembly of molecules. The self-assembled monolayer may be ordered, disordered, or exhibit short- to long-range order.

An “affinity tag” is a functional moiety capable of directly or indirectly immobilizing
5 a protein-capture agent onto a substrate surface or an exposed functionality of an organic
thinfilm covering the substrate surface. In one embodiment, the affinity tag enables the site-
specific immobilization and thus enhances orientation of the protein-capture agent onto the
organic thinfilm. In some cases, the affinity tag may be a simple chemical functional group.
Other possibilities include amino acids, poly amino acids tags, or full-length proteins. Still
10 other possibilities include carbohydrates and nucleic acids. For example, the affinity tag may
be a polynucleotide that hybridizes to another polynucleotide serving as a functional group on
the organic thinfilm or another polynucleotide serving as an adaptor. The affinity tag may
also be a synthetic chemical moiety. If the organic thinfilm of each of the regions of protein-
capture agents comprises a lipid bilayer or monolayer, then a membrane anchor is a suitable
15 affinity tag. The affinity tag may be covalently or noncovalently attached to the protein-
capture agent. For example, if the affinity tag is covalently attached to the protein-capture
agent it may be attached via chemical conjugation or as a fusion protein. The affinity tag
may also be attached to the protein-capture agent via a cleavable linkage. Alternatively, the
affinity tag may not be directly in contact with the protein-capture agent. Rather, the affinity
20 tag may be separated from the protein-capture agent by an adaptor. The affinity tag may
immobilize the protein-capture agent to the organic thinfilm either through noncovalent
interactions or through a covalent linkage.

An “adaptor,” for purposes of this invention, is any entity that links an affinity tag to
the protein-capture agent. The adaptor may be, but is not limited to, a discrete molecule that
25 is noncovalently attached to both the affinity tag and the protein-capture agent. The adaptor
may be covalently attached to the affinity tag or the protein-capture agent or both, via
chemical conjugation or as a fusion protein. Full-length proteins, polypeptides, or peptides
may base used as adaptors. Other possible adaptors include carbohydrates or nucleic acids.

The term “fusion protein” refers to a protein composed of two or more polypeptides
30 that, although typically not joined in their native state, are joined by their respective amino
and carboxyl termini through a peptide linkage to form a single continuous polypeptide. It is
understood that the two or more polypeptide components can either be directly joined or
indirectly joined through a peptide linker/spacer.

The term “normal physiological conditions” means conditions that are typical inside a living organism or a cell. Although some organs or organisms provide extreme conditions, the intra-organismal and intra-cellular environment normally varies around pH 7 (i.e., from pH 6.5 to pH 7.5), contains water as the predominant solvent, and exists at a temperature
5 above 0°C and below 50°C. The concentration of various salts depends on the organ, organism, cell, or cellular compartment used as a reference.

I. Nucleic Acid Microarrays

Microarray technology provides the opportunity to analyze a large number of nucleic acid sequences. This technology may also be utilized for comparative gene expression
10 analysis, drug discovery, and characterization of molecular interactions. With respect to expression analysis, the expression pattern of a particular gene may be used to characterize the function of that gene. In addition, microarrays may be utilized to analyze both the static expression of a gene (e.g., expression in a specific tissue) as well as, dynamic expression of a particular gene (e.g., expression of one gene relative to the expression of other genes)
15 (Duggan et al., 21 NATURE GENET. 10-14 (1999)).

An advantage of the microarray technology is the use of an impermeable, rigid support as compared to the porous membranes used in the traditional blotting methods (e.g., Northern and Southern analyses). Hybridization buffers do not penetrate the support resulting in greater access to the oligonucleotide probes, enhanced rates of hybridization, and
20 improved reproducibility. In addition, the microarray technology provides better image acquisition and image processing (Southern et al., 21 NATURE GENET. 5-9 (1999)). For microarray analysis, nucleic acids (e.g., RNA) may be isolated from a biological sample. Nucleic acid samples include, but are not limited to, mRNA transcripts of the gene or genes, cDNA reverse transcribed from the mRNA, cRNA transcribed from the cDNA, DNA
25 amplified from the genes, RNA transcribed from amplified DNA, and the like.

A. Methods For Producing Nucleic Acid Microarrays

The microarrays may be produced through spatially directed oligonucleotide synthesis. Methods for spatially directed oligonucleotide synthesis include, without
30 limitation, light-directed oligonucleotide synthesis, microlithography, application by ink jet, microchannel deposition to specific locations and sequestration with physical barriers. In general, these methods involve generating active sites, usually by removing protective groups, and coupling to the active site a nucleotide that, itself, optionally has a protected active site if further nucleotide coupling is desired.

A microarray may be configured, for example, by *in situ* synthesis or by direct deposition ("spotting" or "printing") of synthesized oligonucleotide probes onto the support. The oligonucleotide probes are used to detect complementary nucleic acid sequences in a target sample of interest. *In situ* synthesis has several advantages over direct placement such as higher yields, consistency, efficiency, cost, and potential use of combinatorial strategies (Southern et al. (1999)). However, for longer nucleic acid sequences such as PCR products, deposition may be the preferred method. Generation of microarrays by *in situ* synthesis may be accomplished by a number of methods including photochemical deprotection, ink-jet delivery, and flooding channels (Lipshutz et al., 21 NATURE GENET. 20-24 (1999); Blanchard et al., 11 BIOSENSORS AND BIOELECTRONICS, 687-90 (1996); Maskos et al., 21 NUCLEIC ACIDS RES. 4663-69 (1993)).

The present invention relates to the construction of microarrays by the *in situ* synthesis method using solid-phase DNA synthesis and photolithography (Lipshutz et al. (1999)). Linkers with photolabile protecting groups may be covalently or non-covalently attached to a support (*e.g.*, glass). Light is then directed through a photolithographic screen to specific areas on the support resulting in localized photodeprotection and yielding reactive hydroxyl groups in the illuminated regions. A 3'-O-phosphoramidite-activated deoxynucleoside (protected at the 5'-hydroxyl with a photolabile group) is then incubated with the support and coupling occurs at deprotected sites that were exposed to light. Following the optional capping of unreacted active sites and oxidation, the substrate is rinsed and the surface is illuminated through a second screen, to expose additional hydroxyl groups for coupling to the linker. A second 5'-protected, 3'-O-phosphoramidite-activated deoxynucleoside is presented to the support. The selective photodeprotection and coupling cycles are repeated until the desired products are obtained. Photolabile groups may then be removed and the sequence may be capped. Side chain protective groups may also be removed. Because photolithography is used, the process may be miniaturized to generate high-density microarrays of oligonucleotide probes. Thus, thousands to hundreds of thousands of arbitrary oligonucleotide probes may be generated on a single microarray support using this technology.

To produce a microarray by the spotting method, oligonucleotide probes are prepared, generally by PCR, for printing onto the microarray support. As described for the *in situ* technique, the probes may be selected from a number of sources including nucleic acid databases such as GenBank, Unigen, HomoloGene, RefSeq, dbEST, and dbSNP (Wheeler et

al., 29 NUCLEIC ACIDS RES. 11-16 (2001)). In addition, oligonucleotide probes may be randomly selected from cDNA libraries reflecting, for example, a tissue type (*e.g.*, cardiac or neuronal tissue), or a genomic library representing a species of interest (*e.g.*, *Drosophila melanogaster*). If PCR is used to generate the probes, for example, approximately 100-500
5 pg of the purified PCR product (about 0.6-2.4 kb) may be spotted onto the support (Duggan et al., 1999). The spotting (or printing) may be performed by a robotic arrayer (*see, e.g.*, U.S. Patent Nos. 6,150,147; 5,968,740; 5,856,101; 5,474,796; and 5,445,934;).

A number of different microarray configurations and methods for their production are known to those of skill in the art and are disclosed in U.S. Patent Nos.: 6,156,501; 6,077,674;
10 6,022,963; 5,919,523; 5,885,837; 5,874,219; 5,856,101; 5,837,832; 5,770,722; 5,770,456; 5,744,305; 5,700,637; 5,624,711; 5,593,839; 5,571,639; 5,556,752; 5,561,071; 5,554,501; 5,545,531; 5,529,756; 5,527,681; 5,472,672; 5,445,934; 5,436,327; 5,429,807; 5,424,186; 5,412,087; 5,405,783; 5,384,261; 5,242,974; and the disclosures of which are herein incorporated by reference. Patents describing methods of using arrays in various applications
15 include: U.S. Patent Nos. 5,874,219; 5,848,659; 5,661,028; 5,580,732; 5,547,839; 5,525,464; 5,510,270; 5,503,980; 5,492,806; 5,470,710; 5,432,049; 5,324,633; 5,288,644; 5,143,854; and the disclosures of which are incorporated herein by reference.

B. Microarray Supports

A microarray support may comprise a flexible or rigid substrate. A flexible substrate
20 is capable of being bent, folded, or similarly manipulated without breakage. Examples of solid materials that are flexible solid supports with respect to the present invention include membranes, such as nylon and flexible plastic films. The rigid supports of microarrays are sufficient to provide physical support and structure to the associated oligonucleotides under the appropriate assay conditions.

The support may be biological, nonbiological, organic, inorganic, or a combination of
25 any of these, existing as particles, strands, precipitates, gels, sheets, tubing, spheres, containers, capillaries, pads, slices, films, plates, or slides. In addition, the support may have any convenient shape, such as a disc, square, sphere, or circle. In one embodiment, the support is flat but may take on a variety of alternative surface configurations. For example,
30 the support may contain raised or depressed regions on which the synthesis takes place. The support and its surface may form a rigid support on which the reactions described herein may be carried out. The support and its surface may also be chosen to provide appropriate light-absorbing characteristics. For example, the support may be a polymerized Langmuir

Blodgett film, functionalized glass, Si, Ge, GaAs, GaP, SiO₂, SiN₄, modified silicon, or any one of a wide variety of gels or polymers such as (poly)tetrafluoroethylene, (poly)vinylidenedifluoride, polystyrene, polycarbonate, or combinations thereof. The surface of the support may also contain reactive groups, such as carboxyl, amino, hydroxyl, and thiol groups. The surface may be transparent and contain SiOH functional groups, such as found on silica surfaces.

The support may be composed of a number of materials including glass. There are several advantages for utilizing glass supports in constructing a microarray. For example, microarrays prepared using a glass support, generally utilize microscope slides due to the low inherent fluorescence, thus, minimizing background noise. Moreover, hundreds to thousands of oligonucleotide probes may be attached to slide. The glass slides may be coated with polylysine, amino silanes, or amino-reactive silanes that enhance the hydrophobicity of the slide and improve the adherence of the oligonucleotides (Duggan et al. (1999)). Ultraviolet irradiation is used to crosslink the oligonucleotide probes to the glass support. Following irradiation, the support may be treated with succinic anhydride to reduce the positive charge of the amines. For double-stranded oligonucleotides, the support may be subjected to heat (e.g., 95°C) or alkali treatment to generate single-stranded probes. An additional advantage to using glass is its nonporous nature, thus, requiring a minimal volume of hybridization buffer resulting in enhanced binding of target samples to probes.

In another embodiment, the support may be flat glass or single-crystal silicon with surface relief features of less than about 10 angstroms. The surface of the support may be etched using well-known techniques to provide desired surface features. For example, trenches, v-grooves, or mesa structures allow the synthesis regions to be more closely placed within the focus point of impinging light.

The present invention also relates to nucleic acid microarray supports comprising beads. These beads may have a wide variety of shapes and may be composed of numerous materials. Generally, the beads used as supports may have a homogenous size between about 1 and about 100 microns, and may include microparticles made of controlled pore glass (CPG), highly crosslinked polystyrene, acrylic copolymers, cellulose, nylon, dextran, latex, and polyacrolein. *See e.g.*, U.S. Patent. Nos. 6,060,240; 4,678,814; and 4,413,070.

Several factors may be considered when selecting a bead for a support including material, porosity, size, shape, and linking moiety. Other important factors to be considered in selecting the appropriate support include uniformity, efficiency as a synthesis support,

surface area, and optical properties (*e.g.*, autofluorescence). Typically, a population of uniform oligonucleotide or nucleic acid fragment may be employed. However, beads with spatially discrete regions each containing a uniform population of the same oligonucleotide or nucleic acid fragment (and no other), may also be employed. In one embodiment, such regions are spatially discrete so that signals generated by fluorescent emissions at adjacent regions can be resolved by the detection system being employed.

In general, the support beads may be composed of glass (silica), plastic (synthetic organic polymer), or carbohydrate (sugar polymer). A variety of materials and shapes may be used, including beads, pellets, disks, capillaries, cellulose beads, pore-glass beads, silica gels, polystyrene beads optionally crosslinked with divinylbenzene, grafted co-poly beads, polyacrylamide beads, latex beads, dimethylacrylamide beads optionally cross-linked with N,N-1-bis-acryloyl ethylene diamine, and glass particles coated with a hydrophobic polymer (*e.g.*, a material having a rigid or semirigid surface). The beads may also be chemically derivatized so that they support the initial attachment and extension of nucleotides on their surface.

Oligonucleotide probes may be synthesized directly on the bead, or the probes may be separately synthesized and attached to the bead. *See e.g.*, Albretsen et al., 189 ANAL. BIOCHEM. 40-50 (1990); Lund et al., 16 NUCLEIC ACIDS RES. 10861-80 (1988); Ghosh et al., 15 NUCLEIC ACIDS RES. 5353-72 (1987); Wolf et al., 15 NUCLEIC ACIDS RES. 2911-26 (1987). The attachment to the bead may be permanent, or a cleavable linker between the bead and the probe may also be used. The link should not interfere with the probe-target binding during screening. Linking moieties for attaching and synthesizing tags on microparticle surfaces are disclosed in U.S. No. Patent 4,569,774; Beattie et al., 39 CLIN. CHEM. 719-22 (1993); Maskos and Southern, 20 NUCLEIC ACIDS RES. 1679-84 (1992); Damba et al., 18 NUCLEIC ACIDS RES. 3813-21 (1990); and Pon et al., 6 BIOTECHNIQUES 768-75 (1988). Various links may include polyethyleneoxy, saccharide, polyol, esters, amides, saturated or unsaturated alkyl, aryl, and combinations thereof.

If the oligonucleotide probes are chemically synthesized on the bead, the bead-oligo linkage may be stable during the deprotection step of photolithography. During standard phosphoramidite chemical synthesis of oligonucleotides, a succinyl ester linkage may be used to bridge the 3' nucleotide to the resin. This linkage may be readily hydrolyzed by NH₃ prior to and during deprotection of the bases. The finished oligonucleotides may be released from the resin in the process of deprotection. The probes may be linked to the beads by a siloxane

linkage to Si atoms on the surface of glass beads; a phosphodiester linkage to the phosphate of the 3'-terminal nucleotide via nucleophilic attack by a hydroxyl (typically an alcohol) on the bead surface; or a phosphoramidate linkage between the 3'-terminal nucleotide and a primary amine conjugated to the bead surface.

5 Numerous functional groups and reactants may be used to detach the oligonucleotide probes. For example, functional groups present on the bead may include hydroxy, carboxy, iminohalide, amino, thio, active halogen (Cl or Br) or pseudohalogen (*e.g.*, CF₃, CN), carbonyl, silyl, tosyl, mesylates, brosylates, and triflates. In some instances, the bead may have protected functional groups that may be partially or wholly deprotected.

10 1. Microarray Support Surface

The support of the microarrays may comprise at least one surface on which a pattern of oligonucleotide probes is present, where the surface may be smooth or substantially planar, or have irregularities, such as depressions or elevations. The surface on which the probes are located may be modified with one or more different layers of compounds that serve to
15 modulate the properties of the surface. Such modification layers may generally range in thickness from a monomolecular thickness of about 1 mm, preferably from a monomolecular thickness of about 0.1 mm, and most preferred from a monomolecular thickness of about 0.001 mm. Modification layers include, for example, inorganic and organic layers such as metals, metal oxides, polymers, small organic molecules and the like. Polymeric layers
20 include peptides, proteins, polynucleic acids or mimetics thereof (*e.g.*, peptide nucleic acids), polysaccharides, phospholipids, polyurethanes, polyesters, polycarbonates, polyureas, polyamides, polyethyleneamines, polyarylene sulfides, polysiloxanes, polyimides, and polyacetates. The polymers may be hetero- or homopolymeric, and may or may not have separate functional moieties attached.

25 The oligonucleotide probes of a microarray may be arranged on the surface of the support based on size. With respect to the arrangement according to size, the probes may be arranged in a continuous or discontinuous size format. In a continuous size format, each successive position in the microarray, for example, a successive position in a lane of probes, comprises oligonucleotide probes of the same molecular weight. In a discontinuous size
30 format, each position in the pattern (*e.g.*, band in a lane) represents a fraction of target molecules derived from the original source, where the probes in each fraction will have a molecular weight within a determined range.

The probe pattern may take on a variety of configurations as long as each position in the microarray represents a unique size (*e.g.*, molecular weight or range of molecular weights), depending on whether the array has a continuous or discontinuous format. The microarrays may comprise a single lane or a plurality of lanes on the surface of the support.

5 Where a plurality of lanes are present, the number of lanes will usually be at least about 2 but less than about 200 lanes, preferably more than about 5 but less than about 100 lanes, and most preferred more than about 8 but less than about 80 lanes.

Each microarray may contain oligonucleotide probes isolated from the same source (*e.g.*, the same tissue), or contain probes from different sources (*e.g.*, different tissues, 10 different species, disease and normal tissue). As such, probes isolated from the same source may be represented by one or more lanes; whereas probes from different sources may be represented by individual patterns on the microarray where probes from the same source are similarly located. Therefore, the surface of the support may represent a plurality of patterns of oligonucleotide probes derived from different sources (*e.g.*, tissues), where the probes in 15 each lane are arranged according to size, either continuously or discontinuously.

Surfaces of the support are usually, though not always, composed of the same material as the support. Alternatively, the surface may be composed of any of a wide variety of materials, for example, polymers, plastics, resins, polysaccharides, silica or silica-based materials, carbon, metals, inorganic glasses, membranes, or any of the above-listed substrate 20 materials. The surface may contain reactive groups, such as carboxyl, amino, or hydroxyl groups. The surface may be optically transparent and may have surface SiOH functionalities, such as are found on silica surfaces.

2. Attachment of Oligonucleotide Probes

The surface of the support may possess a layer of linker molecules (or spacers). The 25 linker molecules may be of sufficient length to permit oligonucleotide probes on the support to hybridize to nucleic acid molecules and to interact freely with molecules exposed to the support. The linker molecules may be about 6-50 molecules long to provide sufficient exposure. The linker molecules may also be, for example, aryl acetylene, ethylene glycol oligomers containing about 2-10 monomer units, diamines, diacids, amino acids, or 30 combinations thereof.

The linker molecules may be attached to the support via carbon-carbon bonds using, for example, (poly)trifluorochloroethylene surfaces, or preferably, by siloxane bonds (using, for example, glass or silicon oxide surfaces). Siloxane bonds may be formed via reactions of

linker molecules containing trichlorosilyl or trialkoxysilyl groups. The linker molecules may also have a site for attachment of a longer chain portion. For example, groups that are suitable for attachment to a longer chain portion may include amines, hydroxyl, thiol, and carboxyl groups. The surface attaching portions may include aminoalkylsilanes, hydroxyalkylsilanes, bis(2-hydroxyethyl)-aminopropyltriethoxysilane, 2-hydroxyethylaminopropyltriethoxysilane, aminopropyltriethoxysilane, and hydroxypropyltriethoxysilane. The linker molecules may be attached in an ordered array (e.g., as parts of the head groups in a polymerized Langmuir Blodgett film). Alternatively, the linker molecules may be adsorbed to the surface of the support.

The linker may be a length that is at least the length spanned by, for example, two to four nucleotide monomers. The linking group may be an alkylene group (from about 6 to about 24 carbons in length), a polyethyleneglycol group (from about 2 to about 24 monomers in a linear configuration), a polyalcohol group, a polyamine group (e.g., spermine, spermidine, or polymeric derivatives thereof), a polyester group (e.g., poly(ethylacrylate) from 3 to 15 ethyl acrylate monomers in a linear configuration), a polyphosphodiester group, or a polynucleotide (from about 2 to about 12 nucleic acids). For *in situ* synthesis, the linking group may be provided with functional groups that can be suitably protected or activated. The linking group may be covalently attached to the oligonucleotide probes by an ether, ester, carbamate, phosphate ester, or amine linkage. In one embodiment, linkages are phosphate ester linkages, which can be formed in the same manner as the oligonucleotide linkages. For example, hexaethyleneglycol may be protected on one terminus with a photolabile protecting group (e.g., NVOC or MeNPOC) and activated on the other terminus with 2-cyanoethyl-N,N-diisopropylamino-chlorophosphite to form a phosphoramidite. This linking group may then be used for construction of oligonucleotide probes in the same manner as the photolabile-protected, phosphoramidite-activated nucleotides.

Furthermore, the linker molecules and oligonucleotide probes may contain a functional group with a bound protective group. In one embodiment, the protective group is on the distal or terminal end of the linker molecule opposite the support. The protective group may be either a negative protective group (e.g., the protective group renders the linker molecules less reactive with a monomer upon exposure) or a positive protective group (e.g., the protective group renders the linker molecules more reactive with a monomer upon exposure). In the case of negative protective groups, an additional reactivation step may be required, for example, through heating. The protective group on the linker molecules may be

selected from a wide variety of positive light-reactive groups preferably including nitro aromatic compounds, such as o-nitrobenzyl derivatives or benzyloxycarbonyl. Other protective groups include 6-nitroveratryloxycarbonyl (NVOC), 2-nitrobenzyloxycarbonyl (NBOC) or α,α -dimethyl-dimethoxybenzyloxycarbonyl (DDZ). Photoremovable protective groups are described in, for example, Patchornik, 92 J. AM. CHEM. SOC. 6333 (1970) and Amit et al., 39 J. ORG. CHEM. 192 (1974).

C. Oligonucleotide Probes

A microarray may contain any number of different oligonucleotide probes. The microarray may have from about 2 to about 100 probes, about 100 to about 10,000 probes, or between about 10,000 and about 1,000,000 probes. In addition, the microarray may have a density of more than 100 oligonucleotide probes at known locations per cm^2 , more than 1,000 probes per cm^2 , or more than 10,000 per cm^2 .

To detect gene expression, oligonucleotide probes may be designed and synthesized based on known sequence information. For example, 20- to 30-mer oligonucleotides that may be derived from known cDNA or EST sequences may be selected to monitor expression (Lipshutz et al. (1999)). The oligonucleotide probes may be selected from a number of sources including nucleic acid databases such as GenBank, Unigen, HomoloGene, RefSeq, dbEST, and dbSNP (Wheeler et al., 29 NUCL. ACIDS RES. 11-16 (2001)). Generally, the probe is complementary to the reference sequence, preferably unique to the tissue or cell type (e.g., skeletal muscle, neuronal tissue) of interest, and preferably hybridizes with high affinity and specificity (Lockhart et al., 14 NATURE BIOTECHNOL. 1675-80 (1996)). In addition, the oligonucleotide probe may represent non-overlapping sequences of the reference sequence that improves probe redundancy resulting in a reduction in false positive rate and an increased accuracy in target quantitation (Lipshutz et al. (1999)).

In one embodiment of the present invention, the oligonucleotide probes are relatively unique, for example, at least about 60-80% of the probes may comprise unique oligonucleotides. In another embodiment, modified oligonucleotides from about 80-300 nucleotides in length, or from about 100-200 nucleotides in length, may be used on the microarrays. These are especially useful in place of cDNAs for determining the presence of mRNA in a sample, as the modified oligonucleotides have the advantage of rapid synthesis and purification and analysis before attachment to the substrate surface. In particular, oligonucleotides with 2'-modified sugar groups demonstrate increased binding affinity with

RNA, and these oligonucleotides are particularly advantageous in identifying mRNA in a sample exposed to a microarray.

Generally, the oligonucleotide probes are generated by standard synthesis chemistries such as phosphoramidite chemistry (U.S. Patent Nos. 4,980,460; 4,973,679; 4,725,677; 4,458,066; and 4,415,732; Beaucage and Iyer, 48 TETRAHEDRON 2223-2311 (1992)). Alternative chemistries that create non-natural backbone groups, such as phosphorothionate and phosphoroamidate may also be employed.

Using the "flow channel" method, oligonucleotide probes are synthesized at selected regions on the support by forming flow channels on the surface of the support through which appropriate reagents flow or in which appropriate reagents are placed. For example, if a monomer is to be bound to the support in a selected region, all or part of the surface of the selected region may be activated for binding by flowing appropriate reagents through all or some of the channels, or by washing the entire support with appropriate reagents. After placing a channel block on the surface of the support, a reagent containing the monomer may flow through or may be placed in all or some of the channels. The channels provide fluid contact to the first selected region, thereby binding the monomer on the support directly or indirectly (via a spacer) in the first selected region.

If a second monomer is coupled to a second selected region, some of which may be included among the first selected region, the second selected region may be in fluid contact with second flow channels through translation, rotation, or replacement of the channel block on the surface of the support; through opening or closing a selected valve; or through deposition. The second region may then be activated. Thereafter, the second monomer may then flow through or may be placed in the second flow channels, binding the second monomer to the second selected region. Thus, the resulting oligonucleotides bound to the support are, for example, A, B, and AB. The process is repeated to form a microarray of oligonucleotide probes of desired length at known locations on the support.

Microarrays may have a plurality of modified oligonucleotides or polynucleotides stably associated with the surface of a support, *e.g.*, covalently attached to the surface with or without a linker molecule. Each oligonucleotide on the array comprises a modified oligonucleotide composition of known identity and usually of known sequence. By stable association, the associated modified oligonucleotides maintain their position relative to the support under hybridization and washing conditions.

The oligonucleotides may be non-covalently or covalently associated with the support surface. Examples of non-covalent association include non-specific adsorption, binding based on electrostatic interactions (*e.g.*, ion pair interactions), hydrophobic interactions, hydrogen bonding interactions, and specific binding through a specific binding pair member covalently attached to the support surface. Examples of covalent binding include covalent bonds formed between the oligonucleotides and a functional group present on the surface of the rigid support (*e.g.*, -OH), where the functional group may be naturally occurring or present as a member of an introduced linking group.

II. Protein Microarrays

Although attempts to evaluate gene activity and to decipher biological processes have traditionally focused on genomics, proteomics offers a promising look at the biological functions of a cell. Proteomics involves the qualitative and quantitative measurement of gene activity by detecting and quantitating expression at the protein level, rather than at the messenger RNA level. Proteomics also involves the study of non-genome encoded events including the post-translational modification of proteins, interactions between proteins, and the location of proteins within the cell.

The study of gene expression at the protein level is important because many of the most important cellular processes are regulated by the protein status of the cell, not by the status of gene expression. In addition, the protein content of a cell is highly relevant to drug discovery efforts because many drugs are designed to be active against protein targets.

Current technologies for the analysis of proteomes are based on a variety of protein separation techniques followed by identification of the separated proteins. The most popular method is based on 2D-gel electrophoresis followed by “in-gel” proteolytic digestion and mass spectroscopy. This 2D-gel technique requires large sample sizes, is time consuming, and is currently limited in its ability to reproducibly resolve a significant fraction of the proteins expressed by a human cell. Techniques involving some large-format 2D-gels can produce gels that separate a larger number of proteins than traditional 2D-gel techniques, but reproducibility is still poor and over 95% of the spots cannot be sequenced due to limitations with respect to sensitivity of the available sequencing techniques. The electrophoretic techniques are also plagued by a bias towards proteins of high abundance.

Standard assays for the presence of an analyte in a solution, such as those commonly used for diagnostics, for example, involve the use of an antibody which has been raised against the targeted antigen. Multianalyte assays known in the art involve the use of multiple

antibodies and are directed towards assaying for multiple analytes. However, these multianalyte assays have not been directed towards assaying the total or partial protein content of a cell or cell population. Furthermore, sample sizes required to adapt such standard antibody assay approaches to the analysis of even a fraction of the estimated 100,000 or more different proteins of a human cell and their various modified states are prohibitively large. Automation and/or miniaturization of antibody assays are required if large numbers of proteins are to be assayed simultaneously. Materials, surface coatings, and detection methods used for macroscopic immunoassays and affinity purification are not readily transferable to the formation or fabrication of miniaturized protein arrays.

Miniaturized DNA chip technologies have been developed and are currently being exploited for the screening of gene expression at the mRNA level. *See, e.g.*, U.S. Pat. Nos. 5,744,305; 5,412,087; and 5,445,934. These chips may be used to determine which genes are expressed by different types of cells and in response to different conditions. However, DNA biochip technology is not transferable to protein-binding assays such as antibody assays because the chemistries and materials used for DNA biochips are not readily transferable to use with proteins. Nucleic acids such as DNA withstand temperatures up to 100°C, can be dried and re-hydrated without loss of activity, and can be bound physically or chemically directly to organic adhesion layers supported by materials such as glass while maintaining their activity. In contrast, proteins such as antibodies are preferably kept hydrated and at ambient temperatures are sensitive to the physical and chemical properties of the support materials. Therefore, maintaining protein activity at the liquid-solid interface requires entirely different immobilization strategies than those used for nucleic acids. The proper orientation of the antibody or other protein-capture agent at the interface is desirable to ensure accessibility of their active sites with interacting molecules. With miniaturization of the chip and decreased feature sizes, the ratio of accessible to non-accessible and the ratio of active to inactive antibodies or proteins become increasingly relevant and important.

Thus, there is a need for the ability to assay in parallel a multitude of proteins expressed by a cell or a population of cells in an organism, including up to the total set of proteins expressed by the cell or cells.

A. Microarray Supports

The substrate of the microarray may be either organic or inorganic, biological or non-biological, or any combination of these materials. In addition, the substrate may be transparent or translucent. In one embodiment, the portion of the surface of the substrate

on which the regions of protein-capture agents reside is flat and firm. In another embodiment, the portion of the surface of the substrate on which the regions of protein-capture agents reside is semi-firm. Of course, the protein microarrays of the present invention need not necessarily be flat nor entirely two-dimensional. Indeed, significant topological features may be present on the surface of the substrate surrounding the regions, between the regions or beneath the regions. For example, walls or other barriers may separate the regions of the microarray.

Numerous materials are suitable for use as a substrate in the microarray embodiment of the invention. The substrate of the invention microarray may comprise a material selected from the group consisting of silicon, silica, quartz, glass, controlled pore glass, carbon, alumina, titania, tantalum oxide, germanium, silicon nitride, zeolites, and gallium arsenide. Many metals such as gold, platinum, aluminum, copper, titanium, and their alloys may be useful as substrates of the microarray. Alternatively, many ceramics and polymers may also be used as substrates. Polymers that may be used as substrates include, but are not limited to polystyrene; poly(tetra)fluoroethylene (PTFE); polyvinylidenedifluoride; polycarbonate; polymethylmethacrylate; polyvinylethylene; polyethyleneimine; poly(etherether)ketone; polyoxymethylene (POM); polyvinylphenol; polylactides; polymethacrylimide (PMI); polyalkenesulfone (PAS); polypropylene, polyethylene; polyhydroxyethylmethacrylate (HEMA); polydimethylsiloxane; polyacrylamide; polyimide; and block-copolymers. The substrate on which the regions of protein-capture agents reside may also be a combination of any of the aforementioned substrate materials.

1. Microarray Support Surface

The support surfaces comprises the surface on which each of the protein-capture agents is immobilized. The support surfaces may comprise the substrate surface, an altered substrate surface, a coating applied to or formed on the substrate surface, or an organic thinfilm applied to or formed on the substrate surface or coating surface. Support surfaces comprise materials suitable for immobilization of the protein-capture agents to the microarrays. Suitable support surfaces include membranes, such as nitrocellulose membranes, polyvinylidenedifluoride (PVDF) membranes, and the like. In another embodiment, the support surfaces may comprise a hydrogel such as dextran. Alternatively, the support surfaces may comprise an organic thinfilm including lipids, charged peptides (*e.g.*, polylysine or poly-arginine), or a neutral amino acid (*e.g.*, polyglycine).

The support surfaces may also comprise a compound that has the ability to interact with both the substrate and the protein-capture agent. For example, functionalities enabling interaction with the substrate may include hydrocarbons having functional groups (e.g. --O--, --CONH--, CONHCO--, --NH--, --CO--, --S--, --SO--), which may interact with functional groups on the substrate. Functionalities enabling interaction with the protein-capture agent comprise antibodies, antigens, receptor ligands, compounds comprising binding sites for affinity tags, and the like.

In another embodiment, the support surfaces may include a coating. The coating may be formed on, or applied to, the support surfaces. The substrate may be modified with a coating by using thinfilm technology based, for example, on physical vapor deposition (PVD), plasma-enhanced chemical vapor deposition (PECVD), or thermal processing.

Alternatively, plasma exposure may be used to directly activate or alter the substrate and create a coating. For example, plasma etch procedures can be used to oxidize a polymeric surface (for example, polystyrene or polyethylene to expose polar functionalities such as hydroxyls, carboxylic acids, aldehydes and the like) which then acts as a coating.

Furthermore, the coating may comprise a component to reduce non-specific binding. For example, a polypropylene substrate may be coated with a compound, such as bovine serum albumin, to reduce non-specific binding. Next, a support surfaces comprising dextran functionally linked to a receptor which recognizes M13 epitopes is added to distinct locations on the coating such that phage expressing recombinant proteins will be bound.

In an alternative embodiment, the coating may comprise an antibody. More particularly, antibodies that recognize epitope tags engineered into the recombinant proteins may be employed. Alternatively, recombinant proteins may comprise a poly-histidine affinity tag. In this case, an anti-histidine antibody chemically linked to the substrate provides a support surfaces for immobilization of the protein-capture agents.

In yet another embodiment, the coating may comprise a metal film. The metal film may range from about 50 nm to about 500 nm in thickness. Alternatively, the metal film may range from about 1 nm to about 1 μ m in thickness.

Examples of metal films that may be used as substrate coatings include aluminum, chromium, titanium, tantalum, nickel, stainless steel, zinc, lead, iron, copper, magnesium, manganese, cadmium, tungsten, cobalt, and alloys or oxides thereof. In one embodiment, the metal film is a noble metal film. Noble metals that may be used for a coating include, but are not limited to, gold, platinum, silver, and copper. In another embodiment, the coating

comprises gold or a gold alloy. Electron-beam evaporation may be used to provide a thin coating of gold on the surface of the substrate. Additionally, commercial metal-like substances may be employed such as TALON metal affinity resin and the like.

5 In alternative embodiments, the coating may comprise a composition selected from the group consisting of silicon, silicon oxide, titania, tantalum oxide, silicon nitride, silicon hydride, indium tin oxide, magnesium oxide, alumina, glass, hydroxylated surfaces, and polymers.

10 It is contemplated that the coatings of the microarrays may require the addition of at least one adhesion layer or interlayer between the coating and the substrate. The adhesion layer may be at least about 6 angstroms thick but may be much thicker. For example, a layer of titanium or chromium may be desirable between a silicon wafer and a gold coating. In an alternative embodiment, an epoxy glue such as Epo-tek 377® or Epo-tek 301-2®, (Epoxy Technology Inc., Billerica, Mass.) may be used to aid adherence of the coating to the substrate. Determinations as to what material should be used for the adhesion layer would be
15 obvious to one skilled in the art once materials are chosen for both the substrate and coating. In other embodiments, additional adhesion mediators or interlayers may be necessary to improve the optical properties of the microarray, for example, waveguides for detection purposes.

In one embodiment of the invention, the surface of the coating is atomically flat.
20 The mean roughness of the surface of the coating may be less than about 5 angstroms for areas of at least about $25 \mu\text{m}^2$. In a specific embodiment, the mean roughness of the surface of the coating is less than about 3 angstroms for areas of at least about $25 \mu\text{m}^2$. In one embodiment, the coating may be a template-stripped surface. *See, e.g.*, Hegner et al., 291 SURFACE SCIENCE 39-46 (1993); Wagner et al., 11 LANGMUIR 3867-3875 (1995).

25 Several different types of coating may be combined on the surface. The coating may cover the whole surface of the substrate or only parts of it. In one embodiment, the coating covers the substrate surface only at the site of the regions of protein-capture agents. Techniques useful for the formation of coated regions on the surface of the substrate are well known to those of ordinary skill in the art. For example, the regions of coatings on the
30 substrate may be fabricated by photolithography, micromolding (WO 96/29629), wet chemical or dry etching, or any combination of these.

a. Organic Thinfilms

In a particular embodiment, the support surfaces comprises an organic thinfilm layer. The organic thinfilm on which each of the regions of protein-capture agents resides forms a layer either on the substrate itself or on a coating covering the substrate. In one embodiment, the organic thinfilm on which the protein-capture agents of the regions are immobilized is less than about 20 nm thick. In another embodiment, the organic thinfilm of each of the regions is less than about 10 nm thick.

A variety of different organic thinfilms are suitable for use in the present invention. For example, a hydrogel composed of a material such as dextran may serve as a suitable organic thinfilm on the regions of the microarray. In another embodiment, the organic thinfilm is a lipid bilayer.

In yet another embodiment, the organic thinfilm of each of the regions of the microarray is a monolayer. A monolayer of polyarginine or polylysine adsorbed on a negatively charged substrate or coating may comprise the organic thinfilm. Another option is a disordered monolayer of tethered polymer chains. In a particular embodiment, the organic thinfilm is a self-assembled monolayer. Specifically, the self-assembled monolayer may comprise molecules of the formula $X-R-Y$, wherein R is a spacer, X is a functional group that binds R to the surface, and Y is a functional group for binding protein-capture agents onto the monolayer. In an alternative embodiment, the self-assembled monolayer is comprised of molecules of the formula $(X)_a R(Y)_b$ where a and b are, independently, integers greater than or equal to 1 and X, R, and Y are as previously defined.

In another embodiment, the organic thinfilm comprises a combination of organic thinfilms such as a combination of a lipid bilayer immobilized on top of a self-assembled monolayer of molecules of the formula $X-R-Y$. As another example, a monolayer of polylysine may be combined with a self-assembled monolayer of molecules of the formula $X-R-Y$. See U.S. Pat. No. 5,629,213.

In all cases, the coating, or the substrate itself if no coating is present, must be compatible with the chemical or physical adsorption of the organic thinfilm on its surface. For example, if the microarray comprises a coating between the substrate and a monolayer of molecules of the formula $X-R-Y$, then it is understood that the coating must be composed of a material for which a suitable functional group X is available. If no such coating is present, then it is understood that the substrate must be composed of a material for which a suitable functional group X is available.

In one embodiment of the invention, the area of the substrate surface, or coating surface, which separates the regions of protein-capture agents are free of organic thinfilm. In an alternative embodiment, the organic thinfilm may extend beyond the area of the substrate surface, or coating surface if present, covered by the regions of protein-capture agents. For example, the entire surface of the microarray may be covered by an organic thinfilm on which the plurality of spatially distinct regions of protein-capture agents reside. An organic thinfilm that covers the entire surface of the microarray may be homogenous or may comprise regions of differing exposed functionalities useful in the immobilization of regions of different protein-capture agents.

In yet another embodiment, the areas of the substrate surface or coating surface between the regions of protein-capture agents are covered by an organic thinfilm, but an organic thinfilm of a different type than that of the regions of protein-capture agents. For example, the surfaces between the regions of protein-capture agents may be coated with an organic thinfilm characterized by low non-specific binding properties for proteins and other analytes.

A variety of techniques may be used to generate regions of organic thinfilm on the surface of the substrate or on the surface of a coating on the substrate. These techniques are well known to those skilled in the art and will vary depending upon the nature of the organic thinfilm, the substrate, and the coating, if present. The techniques will also vary depending on the structure of the underlying substrate and the pattern of any coating present on the substrate. For example, regions of a coating that are highly reactive with an organic thinfilm may have already been produced on the substrate surface. Areas of organic thinfilm may be created by microfluidics printing, microstamping (U.S. Pat. Nos. 5,731,152 and 5,512,131), or microcontact printing (WO 96/29629). Subsequent immobilization of protein-capture agents to the reactive monolayer regions result in two-dimensional arrays of the agents. Inkjet printer heads provide another option for patterning monolayer X-R-Y molecules, or components thereof, or other organic thinfilm components to nanometer or micrometer scale sites on the surface of the substrate or coating. *See, e.g.,* Lemmo et al., 69 ANAL CHEM. 543-551 (1997); U.S. Pat. Nos. 5,843,767 and 5,837,860. In some cases, commercially available arrayers based on capillary dispensing may also be of use in directing components of organic thinfilms to spatially distinct regions of the microarray (OmniGrid® from Genemachines, Inc, San Carlos, CA, and High-Throughput Microarrayer from Intelligent Bio-Instruments, Cambridge, MA). Other methods for the formation of organic thinfilms include *in situ*

growth from the surface, deposition by physisorption, spin-coating, chemisorption, self-assembly, or plasma-initiated polymerization from gas phase.

Diffusion boundaries between the regions of protein-capture agents immobilized on organic thinfilms such as self-assembled monolayers may be integrated as topographic patterns (physical barriers) or surface functionalities with orthogonal wetting behavior (chemical barriers). For example, walls of substrate material may be used to separate some of the regions of protein-capture agents from some of the others or all of the regions from each other. Alternatively, non-bioreactive organic thinfilms, such as monolayers, with different wettability may be used to separate regions of protein-capture agents from one another.

B. Protein-Capture Agents

A protein microarray contemplated by the present invention may contain any number of different proteins, amino acid sequences, nucleic acid sequences, or small molecules. In one embodiment, the microarrays may comprise all or a portion of a gene, including functional derivatives, variants, analogs and portions thereof. The present invention also contemplates microarrays comprising one or more antibodies or functional equivalents thereof that bind proteins, ligands, and/or binding partners.

For example, the proteins expressed by the protein protein-capture agents immobilized on the microarray may be members of the same family. Such families include, but are not limited to, families of growth factor receptors, hormone receptors, neurotransmitter receptors, catecholamine receptors, amino acid derivative receptors, cytokine receptors, extracellular matrix receptors, antibodies, lectins, cytokines, serpins, proteinases, kinases, phosphatases, ras-like GTPases, hydrolases, steroid hormone receptors, transcription factors, DNA binding proteins, zinc finger proteins, leucine-zipper proteins, homeodomain proteins, intracellular signal transduction modulators and effectors, apoptosis-related factors, DNA synthesis factors, DNA repair factors, DNA recombination factors, cell-surface antigens, Hepatitis C virus (HCV) proteases, HIC proteases, viral integrases, and proteins from pathogenic bacteria.

A protein-capture agent on the microarray may be any molecule or complex of molecules that has the ability to bind a protein and immobilize it to the site of the protein-capture agent on the microarray. In one aspect, the protein-capture agent binds its binding partner in a substantially specific manner. For example, the protein-capture agent may be a protein whose natural function in a cell is to specifically bind another protein, such as an

antibody or a receptor. Alternatively, the protein-capture agent may be a partially or wholly synthetic or recombinant protein that specifically binds a protein.

Moreover, the protein-capture agent may be a protein which has been selected *in vitro* from a mutagenized, randomized, or completely random and synthetic library by its binding affinity to a specific protein or peptide target. The selection method used may be a display method such as ribosome display or phage display. Alternatively, the protein-capture agent obtained via *in vitro* selection may be a DNA or RNA aptamer that specifically binds a protein target. *See, e.g.,* Potyrailo et al., 70 ANAL. CHEM. 3419-25 (1998); Cohen, et al., 94 PROC. NATL. ACAD. SCI. USA 14272-7 (1998); Fukuda, et al., 37 NUCLEIC ACIDS SYMP. SER., 237-8 (1997). Alternatively, the *in vitro* selected protein-capture agent may be a polypeptide. Roberts and Szostak, 94 PROC. NATL. ACAD. SCI. USA 12297-302 (1997). In yet another embodiment, the protein-capture agent may be a small molecule that has been selected from a combinatorial chemistry library or is isolated from an organism.

In a particular embodiment, however, the protein-capture agents are proteins. The protein-capture agents may be antibodies or antibody fragments. Although antibody moieties are exemplified herein, it is understood that the present arrays and methods may be advantageously employed with other protein-capture agents.

The antibodies or antibody fragments of the microarray may be single-chain Fvs, Fab fragments, Fab' fragments, F(ab')₂ fragments, Fv fragments, dsFvs diabodies, Fd fragments, full-length, antigen-specific polyclonal antibodies, or full-length monoclonal antibodies. In a specific embodiment, the protein-capture agents of the microarray are monoclonal antibodies, Fab fragments or single-chain Fvs.

The antibodies or antibody fragments may be monoclonal antibodies, even commercially available antibodies, against known, well-characterized proteins.

Alternatively, the antibody fragments may be derived by selection from a library using the phage display method. If the antibody fragments are derived individually by selection based on binding affinity to known proteins, then the binding partners of the antibody fragments are known. In an alternative embodiment of the invention, the antibody fragments are derived by a phage display method comprising selection based on binding affinity to the (typically, immobilized) proteins of a cellular extract or a biological sample. In this embodiment, some or many of the antibody fragments of the microarray would bind proteins of unknown identity and/or function.

1. Attachment of Protein-Capture Agents

It is necessary, however, to immobilize proteins-capture agents on a solid support in a way that preserves their folded conformations. Methods of arraying functionally active proteins using microfabricated polyacrylamide gel pads to preserve samples and
5 microelectrophoresis to accelerate diffusion have been described. Arenkov et al., 278 ANAL. BIOCHEM. 123-31 (2000).

The method of attachment will vary with the substrate and protein-capture agent selected. For example, in the case of a phage display library, the method of attachment may involve either the direct attachment of the phage as for example, by anti-M13 antibodies, or
10 by attachment via the recombinant protein as for example via antibodies to an epitope-tag incorporated in the recombinant sequence, or by binding of a histidine-tag (his-tag) incorporated in the recombinant sequence to a metal coating on the support surfaces.

In one embodiment, the protein-immobilizing regions of the microarray comprise an affinity tag that enhances immobilization of the protein-capture agent onto the organic
15 thinfilm. The use of an affinity tag on the protein-capture agent of the microarray provides several advantages. An affinity tag can confer enhanced binding or reaction of the protein-capture agent with the functionalities on the organic thinfilm, such as Y if the organic thinfilm is a an X-R-Y monolayer as previously described. This enhancement effect may be either kinetic or thermodynamic. The affinity tag/organic thinfilm combination used in the
20 regions of protein-capture agents residing on the microarray allows for immobilization of the protein-capture agents in a manner that does not require harsh reaction conditions which are adverse to protein stability or function. In most embodiments, the protein-capture agents are immobilized to the organic thinfilm in aqueous, biological buffers.

An affinity tag also offers immobilization on the organic thinfilm that is specific to a
25 designated site or location on the protein-capture agent (site-specific immobilization). For this to occur, attachment of the affinity tag to the protein-capture agent must be site-specific. Site-specific immobilization helps ensure that the protein-binding site of the agent, such as the antigen-binding site of the antibody moiety, remains accessible to ligands in solution. Another advantage of immobilization through affinity tags is that it allows for a common
30 immobilization strategy to be used with multiple, different protein-capture agents.

The affinity tag may be attached directly, either covalently or noncovalently, to the protein-capture agent. In an alternative embodiment, however, the affinity tag is either

covalently or noncovalently attached to an adaptor that is either covalently or noncovalently attached to the protein-capture agent.

In one embodiment, the affinity tag comprises at least one amino acid. The affinity tag may be a polypeptide comprising at least two amino acids which are reactive with the functionalities of the organic thinfilm. Alternatively, the affinity tag may be a single amino acid that is reactive with the organic thinfilm. Examples of possible amino acids that could be reactive with an organic thinfilm include cysteine, lysine, histidine, arginine, tyrosine, aspartic acid, glutamic acid, tryptophan, serine, threonine, and glutamine. A polypeptide or amino acid affinity tag may be expressed as a fusion protein with the protein-capture agent when the protein-capture agent is a protein, such as an antibody or antibody fragment. Amino acid affinity tags provide either a single amino acid or a series of amino acids that may interact with the functionality of the organic thinfilm, such as the Y-functional group of the self-assembled monolayer molecules. Amino acid affinity tags may be readily introduced into recombinant proteins to facilitate oriented immobilization by covalent binding to the Y-functional group of a monolayer or to a functional group on an alternative organic thinfilm.

The affinity tag may comprise a poly-amino acid tag. A poly-amino acid tag is a polypeptide that comprises from about 2 to about 100 residues of a single amino acid, optionally interrupted by residues of other amino acids. For example, the affinity tag may comprise a poly-cysteine, poly-lysine, poly-arginine, or poly-histidine. Amino acid tags may comprise about two to about twenty residues of a single amino acid, such as, for example, histidines, lysines, arginines, cysteines, glutamines, tyrosines, or any combination of these. For example, an amino acid tag of one to twenty amino acids includes at least one to ten cysteines for thioether linkage; or one to ten lysines for amide linkage; or one to ten arginines for coupling to vicinal dicarbonyl groups. One of ordinary skill in the art can readily pair suitable affinity tags with a given functionality on an organic thinfilm.

The position of the amino acid tag may be at an amino-, or carboxy-terminus of the protein-capture agent which is a protein, or anywhere in-between, as long as the protein-binding region of the protein-capture agent, such as the antigen-binding region of an immobilized antibody moiety, remains in a position accessible for protein binding. Affinity tags introduced for protein purification may be located at the C-terminus of the recombinant protein to ensure that only full-length proteins are isolated during protein purification. For example, if intact antibodies are used on the microarrays, then the attachment point of the affinity tag on the antibody may be located at a C-terminus of the effector (Fc) region of the

antibody. If scFvs are used on the arrays, then the attachment point of the affinity tag may also be located at the C-terminus of the molecules.

Affinity tags may also contain one or more unnatural amino acids. Unnatural amino acids may be introduced using suppressor tRNAs that recognize stop codons (i.e., amber)

5 *See, e.g.*, Cload et al., 3 CHEM. BIOL. 1033-1038 (1996); Ellman et al., 202 METHODS ENZYM. 301-336 (1991); and Noren et al., 244 SCIENCE 182-188 (1989). The tRNAs are chemically amino-acylated to contain chemically altered ("unnatural") amino acids for use with specific coupling chemistries (i.e., ketone modifications, photoreactive groups).

10 In an alternative embodiment, the affinity tag comprises an intact protein, such as, but not limited to, glutathione S-transferase, an antibody, avidin, or streptavidin.

 In embodiments where the protein-capture agent is a protein and the affinity tag is a protein, such as a poly-amino acid tag or a single amino acid tag, the affinity tag may be attached to the protein-capture agent by generating a fusion protein. Alternatively, protein synthesis or protein ligation techniques known to those skilled in the art may be used. For
15 example, intein-mediated protein ligation may be used to attach the affinity tag to the protein-capture agent. *See, e.g.*, Mathys, et al., 231 GENE 1-13 (1999); Evans, et al., 7 PROTEIN SCIENCE 2256-2264 (1998).

 Other protein conjugation and immobilization techniques known in the art may be adapted for the purpose of attaching affinity tags to the protein-capture agent. For example,
20 the affinity tag may be an organic bioconjugate that is chemically coupled to the protein-capture agent of interest. Biotin or antigens may be chemically cross-linked to the protein. Alternatively, a chemical crosslinker may be used that attaches a simple functional moiety such as a thiol or an amine to the surface of a protein serving as a protein-capture agent on the microarray.

25 In one embodiment of the present invention, the organic thinfilm of each of the regions comprises, at least in part, a lipid monolayer or bilayer, and the affinity tag comprises a membrane anchor.

 In an alternative embodiment, no affinity tag is used to immobilize the protein-capture agents onto the organic thinfilm. An amino acid or other moiety (such as a carbohydrate
30 moiety) inherent to the protein-capture agent itself may instead be used to tether the protein-capture agent to the reactive group of the organic thinfilm. In one embodiment, the immobilization is site-specific with respect to the location of the site of immobilization on the protein-capture agent. For example, the sulfhydryl group on the C-terminal region of the

heavy chain portion of a Fab' fragment generated by pepsin digestion of an antibody, followed by selective reduction of the disulfide bond between monovalent Fab' fragments, may be used as the affinity tag. Alternatively, a carbohydrate moiety on the Fc portion of an intact antibody may be oxidized under mild conditions to an aldehyde group suitable for immobilizing the antibody on a monolayer via reaction with a hydrazide-activated Y group on the monolayer. *See e.g.*, U.S. Patent No. 6,329,209; Dammer et al., 70 BIOPHYS J. 2437-2441 (1996).

Because the protein-capture agents of at least some of the different regions on the microarray are different from each other, different solutions, each containing a different protein-capture agent, must be delivered to the individual regions. Solutions of protein-capture agents may be transferred to the appropriate regions via arrayers, which are well-known in the art and even commercially available. For example, microcapillary-based dispensing systems may be used. These dispensing systems may be automated and computer-aided. A description of and building instructions for an example of a microarrayer comprising an automated capillary system can be found on the internet at <http://cmgm.stanford.edu/pbrown/microarray.html> and <http://cmgm.stanford.edu/pbrown/mguide/index.html>. The use of other microprinting techniques for transferring solutions containing the protein-capture agents to the agent-reactive regions is also possible. Ink-jet printer heads may also be used for precise delivery of the protein-capture agents to the agent-reactive regions. Representative, non-limiting disclosures of techniques useful for depositing the protein-capture agents on the appropriate regions of the substrate may be found, for example, in U.S. Patent. Nos. 5,843,767 (ink-jet printing technique, Hamilton 2200 robotic pipetting delivery system); 5,837,860 (ink-jet printing technique, Hamilton 2200 robotic pipetting delivery system); 5,807,522 (capillary dispensing device); and 5,731,152 (stamping apparatus). Other methods of arraying functionally active proteins include attaching proteins to the surfaces of chemically derivatized microscope slides. *See* MacBeath & Schreiber, 289 SCIENCE 1760-63 (2000).

a. Adaptors

Another embodiment of the protein microarrays of the present invention comprises an adaptor that links the affinity tag to the protein-capture agent on the regions of the microarray. The additional spacing of the protein-capture agent from the surface of the substrate (or coating) that is afforded by the use of an adaptor is particularly advantageous if the protein-capture agent is a protein, because proteins are prone to surface inactivation. The

adaptor may afford some additional advantages as well. For example, the adaptor may help facilitate the attachment of the protein-capture agent to the affinity tag. In another embodiment, the adaptor may help facilitate the use of a particular detection technique with the microarray. One of ordinary skill in the art will be able to choose an adaptor which is appropriate for a given affinity tag. For example, if the affinity tag is streptavidin, then the adaptor could be biotin that is chemically conjugated to the protein-capture agent which is to be immobilized.

In one embodiment, the adaptor comprises a protein. In another embodiment, the affinity tag, adaptor, and protein-capture agent together compose a fusion protein. Such a fusion protein may be readily expressed using standard recombinant DNA technology. Protein adaptors are especially useful to increase the solubility of the protein-capture agent of interest and to increase the distance between the surface of the substrate or coating and the protein-capture agent. A protein adaptor can also be very useful in facilitating the preparative steps of protein purification by affinity binding prior to immobilization on the microarray. Examples of possible adaptor proteins include glutathione-S-transferase (GST), maltose-binding protein, chitin-binding protein, thioredoxin, and green-fluorescent protein (GFP). GFP may also be used for quantification of surface binding. In an embodiment in which the protein-capture agent is an antibody moiety comprising the Fc region, the adaptor may be a polypeptide, such as protein G, protein A, or recombinant protein A/G (a gene fusion product secreted from a non-pathogenic form of *Bacillus* which contains four Fc binding domains from protein A and two from protein G).

2. Preparation of the Protein-capture Agents of the Microarray

The protein-capture agents used on the microarray may be produced by any of the variety of means known to those of ordinary skill in the art. The protein-capture agents may comprise proteins, specifically, antibodies or fragments thereof, ligands, receptor proteins, and small molecules.

In preparation for immobilization to the arrays of the present invention, the antibody moiety, or any other protein-capture agent that is a protein or polypeptide, may be expressed from recombinant DNA either *in vivo* or *in vitro*. The cDNA encoding the antibody or antibody fragment or other protein-capture agent may be cloned into an expression vector (many examples of which are commercially available) and introduced into cells of the appropriate organism for expression. A broad range of host cells and protein-capture agents may be used to produce the antibodies and antibody fragments, or other proteins, which serve

as the protein-capture agents on the microarray. Expression *in vivo* may be accomplished in bacteria (*e.g.*, *Escherichia coli*), plants (*e.g.*, *Nicotiana tabacum*), lower eukaryotes (*e.g.*, *Saccharomyces cerevisiae*, *Saccharomyces pombe*, *Pichia pastoris*), or higher eukaryotes (*e.g.*, baculovirus-infected insect cells, insect cells, mammalian cells). For *in vitro*

5 expression, PCR-amplified DNA sequences may be directly used in coupled *in vitro* transcription/translation systems (*e.g.*, *E. coli* S30 lysates from T7 RNA polymerase expressing, preferably protease-deficient strains; wheat germ lysates; reticulocyte lysates). The choice of organism for optimal expression depends on the extent of post-translational modifications (*i.e.*, glycosylation, lipid-modifications) desired. The choice of protein-capture
10 agent also depends on other issues, such as whether an intact antibody is to be produced or just a fragment of an antibody (and which fragment), because disulfide bond formation will be affected by the choice of a host cell. One of ordinary skill in the art will be able to readily choose which host cell type is most suitable for the protein-capture agent and application desired.

15 DNA sequences encoding affinity tags and adaptors may be engineered into the expression vectors such that the protein-capture agent genes of interest can be cloned in frame either 5' or 3' of the DNA sequence encoding the affinity tag and adaptor protein. In most aspects, the expressed protein-capture agents may purified by affinity chromatography using commercially available resins.

20 Production of a plurality of protein-capture agents may involve parallel processing from cloning to protein expression and protein purification. cDNAs encoding the protein-capture agent of interest may be amplified by PCR using cDNA libraries or expressed sequence tag (EST) clones as templates. For *in vivo* expression of the proteins, cDNAs may be cloned into commercial expression vectors and introduced into an appropriate organism
25 for expression. For *in vitro* expression PCR-amplified DNA sequences may be directly used in coupled transcription/translation systems.

E. coli-based protein expression is generally the method of choice for soluble proteins that do not require extensive post-translational modifications for activity. Extracellular or intracellular domains of membrane proteins may be fused to protein adaptors for expression
30 and purification.

The entire approach may be performed using 96-well assay plates. PCR reactions may be carried out under standard conditions. Oligonucleotide primers may contain unique restriction sites for facile cloning into the expression vectors. Alternatively, the TA cloning

system may be used. The expression vectors may further contain the sequences for affinity tags and the protein adaptors. PCR products may be ligated into the expression vectors (under inducible promoters) and introduced into the appropriate competent *E. coli* strain by calcium-dependent transformation (strains include: XL-1 blue, BL21, SG13009 (lon-)).

- 5 Transformed *E. coli* cells are plated and individual colonies transferred into 96-microarray blocks. Cultures are grown to mid-log phase, induced for expression, and cells collected by centrifugation. Cells are resuspended containing lysozyme and the membranes broken by rapid freeze/thaw cycles, or by sonication. Cell debris is removed by centrifugation and the supernatants transferred to 96-tube arrays. The appropriate affinity matrix is added, the
- 10 protein-capture agent of interest is bound and nonspecifically bound proteins are removed by repeated washing and other steps using centrifugation devices. Alternatively, magnetic affinity beads and filtration devices may be used. The proteins are eluted and transferred to a new 96-well microarray. Protein concentrations are determined and an aliquot of each
- 15 protein-capture agent is spotted onto a nitrocellulose filter and verified by Western analysis using an antibody directed against the affinity tag on the protein-capture agent. The purity of each sample is assessed by SDS-PAGE and Silver staining or mass spectrometry. The protein-capture agents are then snap-frozen and stored at -80°C .

- S. cerevisiae* allows for the production of glycosylated protein-capture agents such as antibodies or antibody fragments. For production in *S. cerevisiae*, the approach described
- 20 above for *E. coli* may be used with slight modifications for transformation and cell lysis. Transformation of *S. cerevisiae* may be accomplished by lithium-acetate and cell lysis by lyticase digestion of the cell walls followed by freeze-thaw, sonication or glass-bead extraction. Variations of post-translational modifications may be obtained by using different yeast strains (*i.e.*, *S. pombe*, *P. pastoris*).

- 25 One aspect of the baculovirus system is the array of post-translational modifications that can be obtained, although antibodies and other proteins produced in baculovirus contain carbohydrate structures very different from those produced by mammalian cells. The baculovirus-infected insect cell system requires cloning of viruses, obtaining high titer stocks and infection of liquid insect cell suspensions (cells such as SF9, SF21).

- 30 Mammalian cell-based expression requires transfection and cloning of cell lines. Either lymphoid or non-lymphoid cell may be used in the preparation of antibodies and antibody fragments. Soluble proteins such as antibodies are collected from the medium while intracellular or membrane bound proteins require cell lysis (either detergent solubilization or

freeze-thaw). The protein-capture agents may then be purified by a procedure analogous to that described for *E. coli*.

For *in vitro* translation, the system of choice is *E. coli* lysates obtained from protease-deficient and T7 RNA polymerase overexpressing strains. *E. coli* lysates provide efficient
5 protein expression (30-50µg/ml lysate). The entire process may be carried out in 96-well arrays. Antibody genes or other protein-capture agent genes of interest may be amplified by PCR using oligonucleotides that contain the gene-specific sequences containing a T7 RNA polymerase promoter and binding site and a sequence encoding the affinity tag.

Alternatively, an adaptor protein may be fused to the gene of interest by PCR. Amplified
10 DNAs may be directly transcribed and translated in the *E. coli* lysates without prior cloning for fast analysis. The antibody fragments or other proteins may then be isolated by binding to an affinity matrix and processed as described above.

Alternative *in vitro* translation systems that may be used include wheat germ extracts and reticulocyte extracts. *In vitro* synthesis of membrane proteins or post-translationally
15 modified proteins will require reticulocyte lysates in combination with microsomes.

In one embodiment of the invention, the protein-capture agents on the microarray comprise monoclonal antibodies. The production of monoclonal antibodies against specific protein targets is routine using standard hybridoma technology. In fact, numerous monoclonal antibodies are available commercially.

20 As an alternative to obtaining antibodies or antibody fragments by cell fusion or from continuous cell lines, the antibody moieties may be expressed in bacteriophage. Such antibody phage display technologies are well known to those skilled in the art. The bacteriophage protein-capture agents allow for the random recombination of heavy- and light-chain sequences, thereby creating a library of antibody sequences that may be selected
25 against the desired antigen. The protein-capture agent may be based on bacteriophage lambda or on filamentous phage. The bacteriophage protein-capture agent may be used to express Fab fragments, Fv's with an engineered intermolecular disulfide bond to stabilize the V_H-V_L pair (dsFv's), scFvs, or diabody fragments.

The antibody genes of the phage display libraries may be derived from pre-
30 immunized donors. For example, the phage display library could be a display library prepared from the spleens of mice previously immunized with a mixture of proteins, such as a lysate of human T-cells. Immunization may be used to bias the library to contain a greater number of recombinant antibodies reactive towards a specific set of proteins, such as proteins

found in human T-cells. Alternatively, the library antibodies may be derived from native or synthetic libraries. The native libraries may be constructed from spleens of mice that have not been contacted by external antigen. In a synthetic library, portions of the antibody sequence, typically those regions corresponding to the complementarity determining regions (CDR) loops, have been mutagenized or randomized.

III. Target Samples

Biological samples may be isolated from several sources including, but not limited to, a patient or a cell line. Patient samples may include blood, urine, amniotic fluid, plasma, semen, bone marrow, and tissues. Once isolated, total RNA or protein may be extracted using methods well known in the art. For example, target samples may be generated from total RNA by dT-primed reverse transcription producing cDNA (*see e.g.*, SAMBROOK ET AL., MOLECULAR CLONING: A LABORATORY MANUAL, Cold Spring Harbor Press, New York (1989); AUSUBEL ET AL., CURRENT PROTOCOLS IN MOLECULAR BIOLOGY, John Wiley & Sons, Inc. (1995)). The cDNA may then be transcribed to cRNA by *in vitro* transcription resulting in a linear amplification of the RNA. The target samples may be labeled with, for example, a fluorescent dye (*e.g.*, Cy3-dUTP) or biotin. The labeled targets may be hybridized to the microarray. Laser excitation of the target samples produces fluorescence emissions, which are captured by a detector. This information may then be used to generate a quantitative two-dimensional fluorescence image of the hybridized targets.

Gene expression profiles of a particular tissue or cell type may be generated from RNA (*i.e.*, total RNA or mRNA). Reverse transcription with an oligo-dT primer may be used to isolate and generate mRNA from cellular RNA. To maximize the amount of sample or signal, labeled total RNA may also be used. The RNA may be fluorescently labeled or labeled with a radioactive isotope. For radioactive detection, a low energy emitter, such as ³³P-dCTP, is preferred due to close proximity of the oligonucleotide probes on the support. The fluorophores, Cy3-dUTP or Cy5-dUTP, may used for fluorescent labeling. These fluorophores demonstrate efficient incorporation with reverse transcriptase and better yields. Furthermore, these fluorophores possess distinguishable excitation and emission spectra. Thus, two samples, each labeled with a different fluorophore, may be simultaneously hybridized to a microarray.

The nucleic acid sample may be amplified prior to hybridization. Amplification methods include, but are not limited to PCR (INNIS ET AL., PCR PROTOCOLS. A GUIDE TO METHODS AND APPLICATION, Academic Press, Inc. San Diego, (1990)), ligase chain reaction

(LCR) (Barringer et al., 89 GENE 117 (1990); Wu and Wallace, 4 GENOMES 560 (1989); and Landegren et al., 241 SCIENCE 1077 (1988)), transcription amplification (Kwoh, et al., 86 PROC. NATL. ACAD. SCI. USA 1173 (1989)), and self-sustained sequence replication (Guatelli, et al., 87 PROC. NATL. ACAD. SCI. USA 1874 (1990)).

5 The target nucleic acids may be labeled at one or more nucleotides during or after amplification. Labels suitable for use with microarray technology include labels detectable by spectroscopic, photochemical, biochemical, immunochemical, electrical, optical, or chemical means. In one embodiment, the detectable label is a luminescent label, such as fluorescent labels, chemiluminescent labels, bioluminescent labels, and colorimetric labels.

10 In a specific embodiment, the label is a fluorescent label such as fluorescein, rhodamine, lissamine, phycoerythrin, polymethine dye derivative, phosphor, or Cy2, Cy3, Cy3.5, Cy5, Cy5.5, Cy7. Commercially available fluorescent labels include fluorescein phosphoramidites such as Fluoreprime (Pharmacia, Piscataway, NJ), Fluoredate (Millipore, Bedford, MA), and FAM (ABI, Foster City, CA). Other labels include biotin for staining with labeled

15 streptavidin conjugate, magnetic beads (*e.g.*, Dynabeads), fluorescent dyes (*e.g.*, texas red, rhodamine, green fluorescent protein), radiolabels (*e.g.*, ^3H , ^{125}I , ^{35}S , ^{14}C , or ^{32}P), enzymes (*e.g.*, horseradish peroxidase, alkaline phosphatase), and colorimetric labels such as colloidal gold or colored glass or plastic (*e.g.*, polystyrene, polypropylene, latex) beads (*see e.g.*, U.S. Patent Nos. 4,366,241; 4,277,437; 4,275,149; 3,996,345; 3,939,350; 3,850,752; and

20 3,817,837).

 The labeled RNA targets are then hybridized to the microarray. A number of buffers may be used for hybridization assays. By way of example, but not limitation, the buffers can be any of the following: 5 M betaine, 1 M NaCl, pH 7.5; 4.5 M betaine, 0.5 M LiCl, pH 8.0; 3 M TMACl, 50 mM Tris-HCl, 1 mM EDTA, 0.1% N-lauroyl-sarkosine (NLS); 2.4 M

25 TEACl, 50 mM Tris-HCl, pH 8.0, 0.1% NLS; 1 M LiCl, 10 mM Tris-HCl, pH 8.0, 10% formamide; 2 M GuSCN, 30 mM NaCitrate, pH 7.5; 1 M LiCl, 10 mM Tris-HCl, pH 8.0, 1 mM CTAB; 0.3 mM spermine, 10 mM Tris-HCl, pH 7.5; 2 M NH_4OAc with 2 volumes absolute ethanol. Addition volumes of ionic detergents (such as N-lauroyl-sarkosine) may be added to the buffer. Hybridization may be performed at about 20-65°C (*see e.g.*, U.S. Patent

30 No. 6,045,996). Additional examples of hybridization conditions are disclosed in SAMBROOK ET AL., (1989); Berger and Kimmel, GUIDE TO MOLECULAR CLONING TECHNIQUES, METHODS IN ENZYMOLOGY, (1987), Volume 152, Academic Press, Inc., San Diego, Calif.; Young and Davis, 80 PROC. NATL. ACAD. SCI. U.S.A 1194 (1983).

The hybridization buffer may be a formamide-based buffer or an aqueous buffer containing dextran sulfate or polyethylene glycol (*see e.g.*, Cheung et al., 21 NATURE GENET. 15-19 (1999); SAMBROOK ET AL. (1989)). In addition, the hybridization buffer may contain blocking agents such as sheared salmon sperm DNA or Denhardt's reagent to minimize nonspecific binding or background noise. Approximately 50-200 µg labeled total RNA or 2-5 µg labeled mRNA per hybridization is required for a sufficient fluorescent signal and detection. Typically, the amount of oligonucleotide probes attached to the support is in excess of the labeled target RNA.

Following hybridization, the nucleic acids may be analyzed by detecting one or more labels attached to the target nucleic acids. The labels may be incorporated by any of a number of methods well-known in the art. In one embodiment, the label may be simultaneously incorporated during the amplification step in the preparation of the target nucleic acids. For example, a labeled amplification product may be generated by PCR using labeled primers or labeled nucleotides. Transcription amplification using a labeled nucleotide (*e.g.*, fluorescein-labeled UTP or CTP) incorporates a label into the transcribed nucleic acids. Alternatively, a label may be added directly to the original nucleic acid sample or to the amplification product following amplification. Methods for labeling nucleic acids are well-known in the art and include, for example, nick translation or end-labeling.

The hybridized array is then subjected to laser excitation, which produces an emission with a unique spectra. The spectra are scanned, for example, with a scanning confocal laser microscope generating monochrome images of the microarray. These images are digitally processed and normalized based on a threshold value (*e.g.*, background) using mathematical algorithms. For example, a threshold value of 0 may be assigned when no change in the level of fluorescence is observed; an increase in fluorescence may be assigned a value of +1 and a decrease in fluorescence may be assigned a value of -1. Normalization may be based on a designated subgroup of genes where variations in this subgroup are utilized to generate statistics applicable for evaluating the complete gene microarray. Chen et al., 2 J. BIOMED. OPTICS 364-67 (1997).

Use of one of the protein microarrays of the present invention may involve placing the two-dimensional microarray in a flowchamber with approximately 1-10 µl of fluid volume per 25 mm² overall surface area. The cover over the microarray in the flowchamber is preferably transparent or translucent. In one embodiment, the cover may comprise Pyrex or quartz glass. In other embodiments, the cover may be part of a detection system that

monitors interaction between the protein-capture agents immobilized on the microarray and protein in a solution such as a cellular extract from a biological sample. The flowchambers should remain filled with appropriate aqueous solutions to preserve protein activity.

Salt, temperature, and other conditions are preferably kept similar to those of normal

5 physiological conditions. Proteins in a fluid solution may be flushed into the flow chamber as desired and their interaction with the immobilized protein-capture agents determined.

Sufficient time must be given to allow for binding between the protein-capture agent and its binding partner to occur. The amount of time required for this will vary depending upon the nature and tightness of the affinity of the protein-capture agent for its binding partner.

10 No specialized microfluidic pumps, valves, or mixing techniques are required for fluid delivery to the microarray.

Alternatively, protein-containing fluid may be delivered to each of the regions of protein-capture agents individually. For example, in one embodiment, the regions of the substrate surface where the protein-capture agents reside may be microfabricated in such a
15 way as to allow integration of the microarray with a number of fluid delivery channels oriented perpendicular to the microarray surface, each one of the delivery channels terminating at the site of an individual protein-capture agent-coated region.

The sample, which is delivered to the microarray, will typically be a fluid. In a one embodiment, the sample is a cellular extract or a biological sample. The sample to be
20 assayed may comprise a complex mixture of proteins, including a multitude of proteins which are not binding partners of the protein-capture agents of the microarray. If the proteins to be analyzed in the sample are membrane proteins, then those proteins will typically need to be solubilized prior to administration of the sample to the microarray. If the proteins to be assayed in the sample are proteins secreted by a population of cells in an organism, the
25 sample may be a biological sample. If the proteins to be assayed in the sample are intracellular, a sample may be a cellular extract. In another embodiment, the microarray may comprise protein-capture agents that bind fragments of the expression products of a cell or population of cells in an organism. In such a case, the proteins in the sample to be assayed may have been prepared by performing a digest of the protein in a cellular extract or a
30 biological sample. In an alternative application, the proteins from only specific fractions of a cell are collected for analysis in the sample.

In general, delivery of solutions containing proteins to be bound by the protein-capture agents of the microarray may be preceded, followed, or accompanied by delivery of a

blocking solution. A blocking solution contains protein or another moiety that will adhere to sites of non-specific binding on the microarray. For example, solutions of bovine serum albumin or milk may be used as blocking solutions.

5 The binding partners of the plurality of protein-capture agents on the microarray are proteins that are all expression products, or fragments thereof, of a cell or population of cells of a single organism. The expression products may be proteins, including peptides, of any size or function. They may be intracellular proteins or extracellular proteins. The expression products may be from a one-celled or multicellular organism. The organism may be a plant or an animal. In a specific embodiment of the invention, the binding partners are human
10 expression products, or fragments thereof.

In another embodiment of the present invention, the binding partners of the protein-capture agents of the microarray may be a randomly chosen subset of all the proteins, including peptides, which are expressed by a cell or population of cells in a given organism or a subset of all the fragments of those proteins. Thus, the binding partners of the protein-capture agents of the microarray may represent a wide distribution of different proteins from
15 a single organism.

The binding partners of some or all of the protein-capture agents on the microarray need not necessarily be known. Indeed, the binding partner of a protein-capture agent of the microarray may be a protein or peptide of unknown function. For example, the different
20 protein-capture agents of the microarray may together bind a wide range of cellular proteins from a single cell type, many of which are of unknown identity and/or function.

In another embodiment of the present invention, the binding partners of the protein-capture agents on the microarray are related proteins. The different proteins bound by the protein-capture agents may be members of the same protein family. The different binding
25 partners of the protein-capture agents of the microarray may be either functionally related or simply suspected of being functionally related. The different proteins bound by the protein-capture agents of the microarray may also be proteins that share a similarity in structure or sequence or are simply suspected of sharing a similarity in structure or sequence.

For example, the binding partners of the protein-capture agents on the microarray may be
30 growth factor receptors, hormone receptors, neurotransmitter receptors, catecholamine receptors, amino acid derivative receptors, cytokine receptors, extracellular matrix receptors, antibodies, lectins, cytokines, serpins, proteases, kinases, phosphatases, ras-like GTPases, hydrolases, steroid hormone receptors, transcription factors, heat-shock transcription factors,

DNA-binding proteins, zinc-finger proteins, leucine-zipper proteins, homeodomain proteins, intracellular signal transduction modulators and effectors, apoptosis-related factors, DNA synthesis factors, DNA repair factors, DNA recombination factors, cell-surface antigens, hepatitis C virus (HCV) proteases or HIV proteases and may correspond to all or part of the proteins encoded by the genes of the gene expression profiles of the present invention.

IV. Control Oligonucleotides And Protein-Capture Agents

Control oligonucleotides corresponding to genomic DNA, housekeeping genes, or negative and positive control genes may also be present on the microarray. Similarly, protein-capture agents that bind housekeeping proteins, or negative and positive control proteins, such as beta actin protein, may also be present on the microarray. These controls are used to calibrate background or basal levels of expression, and to provide other useful information.

Normalization controls may be oligonucleotide probes that are perfectly complementary to labeled reference oligonucleotides that are added to the nucleic acid sample. Normalization controls may be protein-capture agents that bind specifically and consistently to a labeled reference protein that is added to the protein sample. For example, a protein-capture agent/normalization control pair may comprise avidin/streptavidin or a well-known antibody/antigen combination with a known binding coefficient. The signals obtained from the normalization controls after hybridization provide a control for variations in hybridization conditions, label intensity, efficiency, and other factors that may cause the hybridization signal to vary between microarrays. To normalize fluorescence intensity measurements, for example, signals from all probes of the microarray may be divided by the signal from the control probes.

Expression level controls are probes or protein-capture agents that hybridize/bind specifically with constitutively expressed genes in the biological sample and are designed to control the overall metabolic activity of a cell. Analysis of the variations in the levels of the expression control as compared to the expression level of the target nucleic acid or target protein indicates whether variations in the expression level of a gene or protein is due specifically to changes in the transcription rate of that gene or to general variations in the health of the cell. Thus, if the expression levels of both the expression control and the target gene decrease or increase, these alterations may be attributed to changes in the metabolic activity of the cell as a whole, not to differential expression of the target gene or protein in question. If only the expression of the target gene or protein varies, however, then the

variation in the expression may be attributed to differences in regulation of that gene or protein and not to overall variations in the metabolic activity of the cell. Constitutively expressed genes such as housekeeping genes (*e.g.*, β -actin gene, transferrin receptor gene, GAPDH gene) may serve as expression level controls.

5 Mismatch controls may also be used for expression level controls or for normalization controls. These probes and protein-capture agents provide a control for non-specific binding or cross-hybridization to a nucleic acid in the sample other than the target to which the probe is directed. Mismatch controls are oligonucleotide probes identical to the corresponding test or control probes except for the presence of one or more mismatched bases. One or more
10 mismatches (*e.g.*, substituting guanine, cytidine, or thymine for adenine) are selected such that under appropriate hybridization conditions (*e.g.*, stringent conditions), the test or control probe would be expected to hybridize with its target sequence, but the mismatch probe would not hybridize or would hybridize to a significantly lesser extent. Similarly, an antibody may be used as a mismatch control protein-capture agent. For example, an antibody may be used
15 that has a base pair mismatch in the binding domain that affects binding as compared to the normal antibody.

V. Detection Methods And Analysis Of Hybridization Results

Methods for signal detection of labeled target nucleic acids hybridized to microarray probes are well-known in the art. For example, a radioactive labeled probe may be detected
20 by radiation emission using photographic film or a gamma counter. For fluorescently labeled target nucleic acids, the localization of the label on the probe microarray may be accomplished with fluorescent microscopy. The hybridized microarray is excited with a light source at the excitation wavelength of the particular fluorescent label and the resulting fluorescence is detected. The excitation light source may be a laser appropriate for the
25 excitation of the fluorescent label.

Confocal microscopy may be automated with a computer-controlled stage to automatically scan the entire microarray. Similarly, a microscope may be equipped with a phototransducer (*e.g.*, a photomultiplier) attached to an automated data acquisition system to automatically record the fluorescence signal produced by hybridization to oligonucleotide
30 probes. *See e.g.*, U.S. Patent. No. 5,143,854.

The present invention also relates to methods for evaluating the hybridization results. These methods may vary with the nature of the specific oligonucleotide probes or protein-capture agent used as well as the controls provided. For example, quantification of the

fluorescence intensity for each probe may be accomplished by measuring the probe signal strength at each location (representing a different probe) on the microarray (*e.g.*, detection of the amount of fluorescence intensity produced by a fixed excitation illumination at each location on the array). The fluorescent intensity for each protein-capture agent and binding pair may be accomplished using similar methods. The absolute intensities of the target nucleic acids or proteins hybridized to the microarray may then be compared with the intensities produced by the controls, providing a measure of the relative expression of the nucleic acids or proteins that hybridize to each of the probes or protein-capture agents.

Normalization of the signal derived from the target nucleic acids to the normalization controls may provide a control for variations in hybridization conditions. Typically, normalization may be accomplished by dividing the measured signal from the other probes or protein-capture agents in the array by the average signal produced by the normalization controls. Normalization may also include correction for variations due to sample preparation and amplification. Such normalization may be accomplished by dividing the measured signal by the average signal from the sample preparation/amplification control probes or protein-capture agents. The resulting values may be multiplied by a constant value to scale the results. Other methods for analyzing microarray data are well-known in the art including coupled two-way clustering analysis, clustering algorithms (hierarchical clustering, self-organizing maps), and support vector machines. *See e.g.*, Brown et al., 97 PROC. NATL. ACAD. SCI. USA 262-67 (2000); Getz et al., 97 PROC. NATL. ACAD. SCI. USA 12079-84 (2000); Holter et al., 97 PROC. NATL. ACAD. SCI. USA 8409-14 (2000); Tamayo et al., 96 PROC. NATL. ACAD. SCI. USA 2907-12 (1999); Eisen et al., 95 PROC. NATL. ACAD. SCI. USA 14863-68 (1998); and Ermolaeva et al., 20 NATURE GENET. 19-23 (1998).

Indeed, the methodologies useful in analyzing gene expression profiles and gene expression data are equally applicable in the context of the study of protein expression. In general, for a variety of applications including proteomics and diagnostics, the methods of the present invention involve the delivery of the sample containing the proteins to be analyzed to the microarrays. After the proteins of the sample have been allowed to interact with and become immobilized on the regions comprising protein-capture agents with the appropriate biological specificity, the presence and/or amount of protein bound at each region is then determined. The detection methods, analysis tools, and algorithms described for the nucleic acid microarrays are equally applicable in the context of protein microarrays.

In addition to the methods described above, a wide range of detection methods are available to analyze the results of protein microarray experiments. Detection may be quantitative and/or qualitative. The protein microarray may be interfaced with optical detection methods such as absorption in the visible or infrared range, chemoluminescence, and fluorescence (including lifetime, polarization, fluorescence correlation spectroscopy (FCS), and fluorescence-resonance energy transfer (FRET)). Other modes of detection such as those based on optical waveguides (WO 96/26432 and U.S. Pat. No. 5,677,196), surface plasmon resonance, surface charge sensors, and surface force sensors are compatible with many embodiments of the present invention. Alternatively, technologies such as those based on Brewster Angle microscopy (BAM) (Schaaf et al., 3 LANGMUIR 1131-1135 (1987)) and ellipsometry (U.S. Pat. Nos. 5,141,311 and 5,116,121; Kim, 22 MACROMOLECULES 2682-2685 (1984)) may be utilized. Quartz crystal microbalances and desorption processes provide still other alternative detection means suitable for at least some embodiments of the invention microarray. *See, e.g.*, U.S. Pat. No. 5,719,060. An example of an optical biosensor system compatible both with some arrays of the present invention and a variety of non-label detection principles including surface plasmon resonance, total internal reflection fluorescence (TIRF), Brewster Angle microscopy, optical waveguide lightmode spectroscopy (OWLS), surface charge measurements, and ellipsometry are discussed in U.S. Pat. No. 5,313,264.

Other different types of detection systems suitable to assay the protein expression arrays of the present invention include, but are not limited to, fluorescence, measurement of electronic effects upon exposure to a compound or analyte, luminescence, ultraviolet visible light, and laser induced fluorescence (LIF) detection methods, collision induced dissociation (CID), mass spectroscopy (MS), CCD cameras, electron and three dimensional microscopy. Other techniques are known to those of skill in the art. For example, analyses of combinatorial arrays and biochip formats have been conducted using LIF techniques that are relatively sensitive. *See, e.g.*, Ideue et al., 337 CHEM. PHYSICS LETTERS 79-84 (2000).

One detection system of particular interest is time-of-flight mass spectrometry (TOF-MS). Using parallel sampling techniques, time-of-flight mass spectrometry may be used for the detailed characterization of hundreds of molecules in a sample mixture at each discrete location within the microarray. Time-of-flight mass spectrometry based systems enable extremely rapid analysis (microseconds to milliseconds instead of seconds for scanning MS devices) high levels of selectivity compared to other techniques with good sensitivity (better

than one part per million, as opposed to one part per ten thousand for scanning MS), As a mass spectroscopic technique, time-of-flight mass spectrometry provides molecular weight and structural information for identification of unknown samples.

Additional levels of sensitivity are added by coupling time-of-flight mass spectrometry to another separation system. Thus, in an embodiment, the present invention comprises using ion mobility in combination with time-of-flight mass spectrometry for the analysis of microarrays. The combination of ion mobility and time-of-flight mass spectrometry is referred to as multi-dimensional spectroscopy (MDS). Ions are electro-sprayed into the front of the MDS device. Electrospray is a method for ionizing relatively large molecules and having them form a gas phase. The solution containing the sample is sprayed at high voltage, forming charged droplets. These droplets evaporate, leaving the sample's ionized molecules in the gas phase. These ions continue into the ion mobility chamber where the ions travel under the influence of a uniform electric field through a buffer gas. The principle underlying ion mobility separation techniques is that compact ions undergo fewer collisions than ions having extended shapes and thus, have increased mobility. As the separated components (comprising ions/molecules of different mobility) exit the drift tube, they are pulsed into a time-of-flight mass spectrometer.

Although non-label detection methods are generally preferred, some of the types of detection methods commonly used for traditional immunoassays that require the use of labels may be applied to the arrays of the present invention. These techniques include noncompetitive immunoassays, competitive immunoassays, and dual label, radiometric immunoassays. These techniques are primarily suitable for use with the arrays of protein-capture agents when the number of different protein-capture agents with different specificity is small (less than about 100). In the competitive method, binding-site occupancy is determined indirectly. In this method, the protein-capture agents of the microarray are exposed to a labeled developing agent, which is typically a labeled version of the analyte or an analyte analog. The developing agent competes for the binding sites on the protein-capture agent with the analyte. The fractional occupancy of the protein-capture agents on different regions can be determined by the binding of the developing agent to the protein-capture agents of the individual regions.

In the noncompetitive method, binding site occupancy is determined directly. In this method, the regions of the microarray are exposed to a labeled developing agent capable of binding to either the bound analyte or the occupied binding sites on the protein-capture agent.

For example, the developing agent may be a labeled antibody directed against occupied sites (*i.e.*, a “sandwich assay”). Alternatively, a dual label, radiometric, approach may be taken where the protein-capture agent is labeled with one label and the second, developing agent is labeled with a second label. *See Ekins, et al., 194 CLINICA CHIMICA ACTA. 91-114, (1990).*

5 Many different labeling methods may be used in the aforementioned techniques, including radioisotopic, enzymatic, chemiluminescent, and fluorescent methods.

VI. Types Of Microarrays

The microarrays of the present invention may be derived from or representative of a specific organism, or cell type, including human microarrays, cancer microarrays, apoptosis
10 microarrays, oncogene and tumor suppressor microarrays, cell-cell interaction microarrays, cytokine and cytokine receptor microarrays, blood microarrays, cell cycle microarrays, neuroarrays, mouse microarrays, and rat microarrays, or combinations thereof.

In further embodiments, the microarrays may represent diseases including cardiovascular diseases, neurological diseases, immunological diseases, various cancers,
15 infectious diseases, endocrine disorders, and genetic diseases.

Alternatively, the microarrays of the present invention may represent a particular tissue type, such as heart, liver, prostate, lung, nerve, muscle, or connective tissue; preferably coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium,
20 myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary
25 artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, prostate stromal cells, or combinations thereof.

The present invention contemplates microarrays comprising a gene expression profile comprising one or more nucleic acid sequences including complementary and homologous sequences, wherein said gene expression profile is generated from a cell type selected from
30 the group comprising coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal

proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

The present invention contemplates microarrays comprising one or more protein-capture agents, wherein said protein expression profile is generated from a cell type selected from the group comprising coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

In a specific embodiment, the present invention provides a microarray comprising an endothelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO: 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144.

In another embodiment, a microarray of the present invention may comprise a muscle cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID

NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69.

In an alternative embodiment, a microarray comprises a primary cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43; SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO: 59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID NO: 63; SEQ ID NO: 64; SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 79; SEQ ID NO: 80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID NO: 83; SEQ ID NO: 84; SEQ ID NO: 85; SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO: 88; SEQ ID NO: 89; SEQ ID NO: 90; SEQ ID NO: 91; SEQ ID NO: 92; SEQ ID NO: 93; SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID NO: 96; SEQ ID NO: 97; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 100; SEQ ID NO: 101; SEQ ID NO: 102; SEQ ID NO: 103; SEQ ID NO: 104; SEQ ID NO: 105; SEQ ID NO: 106; SEQ ID NO: 107; SEQ ID NO: 108; SEQ ID NO: 109; SEQ ID NO: 110; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 113; SEQ ID NO: 114; SEQ ID NO: 115; SEQ ID NO: 116; SEQ ID NO: 118; SEQ ID NO: 119; SEQ ID NO: 120; SEQ ID NO: 121; SEQ ID NO: 122; SEQ ID NO: 123; SEQ ID NO: 124; SEQ ID NO: 125; SEQ ID NO: 126; SEQ ID NO: 127; SEQ ID NO: 128; SEQ ID NO: 129; SEQ ID NO: 130; SEQ ID NO: 131; SEQ ID NO: 132; SEQ ID NO: 133; SEQ ID NO: 134; SEQ ID NO: 135; SEQ ID NO: 136; SEQ ID NO: 137; SEQ ID NO: 138; SEQ ID NO: 139; SEQ ID NO: 140; SEQ ID NO: 141; SEQ ID NO: 142; SEQ ID NO: 143; SEQ ID

NO: 144; SEQ ID NO: 145; SEQ ID NO: 146; SEQ ID NO: 147; SEQ ID NO: 148; SEQ ID NO: 149; SEQ ID NO: 150; SEQ ID NO: 151; SEQ ID NO: 152; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

The present invention also provides a microarray comprising an epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 47; SEQ ID NO: 60; SEQ ID NO: 67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

In yet another embodiment, a microarray may comprise a keratinocyte epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO:

206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; and SEQ ID NO: 211.

The present invention also provides a microarray comprising a mammary epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially
5 homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 78; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 239; SEQ ID NO: 271; SEQ ID NO: 285; and SEQ ID NO: 289.

10 In an alternative embodiment, a microarray may comprise a bronchial epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 169; SEQ ID NO: 214;
15 SEQ ID NO: 215; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 241; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314.

The present invention also provides a microarray comprising a prostate epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially
20 homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 64; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID NO: 320.

In yet another embodiment, a microarray comprises a renal cortical epithelial cell
25 gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 104; SEQ ID NO: 123; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 219; SEQ ID NO: 267; SEQ ID NO: 270;
30 SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 283; SEQ ID NO: 291; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 325; SEQ ID NO: 326; and SEQ ID NO: 327.

The present invention further provides a microarray comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 311; SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329.

In a specific embodiment, a microarray may comprise a small airway epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319.

The present invention also provides a microarray comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324.

In yet another embodiment, a microarray may comprise one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 37; SEQ ID NO: 49;

SEQ ID NO: 57; SEQ ID NO: 64; SEQ ID NO: 70; SEQ ID NO: 78; SEQ ID NO: 104; SEQ
ID NO: 106; SEQ ID NO: 123; SEQ ID NO: 131; SEQ ID NO: 138; SEQ ID NO: 150; SEQ
ID NO: 158; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 169; SEQ
ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 187; SEQ ID NO: 188; SEQ
5 ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ
ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ
ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ
ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ
ID NO: 209; SEQ ID NO: 210; SEQ ID NO: 211; SEQ ID NO: 212; SEQ ID NO: 213; SEQ
10 ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 216; SEQ ID NO: 217; SEQ ID NO: 218; SEQ
ID NO: 219; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 223; SEQ
ID NO: 224; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 228; SEQ
ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ
ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 236; SEQ ID NO: 237; SEQ ID NO: 238; SEQ
15 ID NO: 239; SEQ ID NO: 240; SEQ ID NO: 241; SEQ ID NO: 242; SEQ ID NO: 243; SEQ
ID NO: 244; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ
ID NO: 249; SEQ ID NO: 250; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 253; SEQ
ID NO: 254; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 257; SEQ ID NO: 258; SEQ
ID NO: 259; SEQ ID NO: 260; SEQ ID NO: 261; SEQ ID NO: 262; SEQ ID NO: 263; SEQ
20 ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 266; SEQ ID NO: 267; SEQ ID NO: 268; SEQ
ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 271; SEQ ID NO: 272; SEQ ID NO: 273; SEQ
ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 277; SEQ ID NO: 278; SEQ
ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 283; SEQ
ID NO: 284; SEQ ID NO: 285; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 288; SEQ
25 ID NO: 289; SEQ ID NO: 290; SEQ ID NO: 291; SEQ ID NO: 293; SEQ ID NO: 294; SEQ
ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 298; SEQ ID NO: 299; SEQ
ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 302; SEQ ID NO: 303; SEQ ID NO: 304; SEQ
ID NO: 305; SEQ ID NO: 306; SEQ ID NO: 307; SEQ ID NO: 308; SEQ ID NO: 309; SEQ
ID NO: 310; SEQ ID NO: 311; SEQ ID NO: 312; SEQ ID NO: 313; SEQ ID NO: 314; SEQ
30 ID NO: 315; SEQ ID NO: 316; SEQ ID NO: 317; SEQ ID NO: 318; SEQ ID NO: 320; SEQ
ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 323; SEQ ID NO: 324; SEQ ID NO: 325; SEQ
ID NO: 326; SEQ ID NO: 327; SEQ ID NO: 328; and SEQ ID NO: 329.

In a specific embodiment, the present invention provides a microarray comprising one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO: 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144.

In another embodiment, a microarray may comprise one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69.

In an alternative embodiment, a microarray comprises one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43; SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO: 59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID NO: 63; SEQ ID NO: 64; SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ

ID NO: 78; SEQ ID NO: 79; SEQ ID NO: 80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID
 NO: 83; SEQ ID NO: 84; SEQ ID NO: 85; SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO:
 88; SEQ ID NO: 89; SEQ ID NO: 90; SEQ ID NO: 91; SEQ ID NO: 92; SEQ ID NO: 93;
 SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID NO: 96; SEQ ID NO: 97; SEQ ID NO: 98; SEQ
 5 ID NO: 99; SEQ ID NO: 100; SEQ ID NO: 101; SEQ ID NO: 102; SEQ ID NO: 103; SEQ
 ID NO: 104; SEQ ID NO: 105; SEQ ID NO: 106; SEQ ID NO: 107; SEQ ID NO: 108; SEQ
 ID NO: 109; SEQ ID NO: 110; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 113; SEQ
 ID NO: 114; SEQ ID NO: 115; SEQ ID NO: 116; SEQ ID NO: 118; SEQ ID NO: 119; SEQ
 ID NO: 120; SEQ ID NO: 121; SEQ ID NO: 122; SEQ ID NO: 123; SEQ ID NO: 124; SEQ
 10 ID NO: 125; SEQ ID NO: 126; SEQ ID NO: 127; SEQ ID NO: 128; SEQ ID NO: 129; SEQ
 ID NO: 130; SEQ ID NO: 131; SEQ ID NO: 132; SEQ ID NO: 133; SEQ ID NO: 134; SEQ
 ID NO: 135; SEQ ID NO: 136; SEQ ID NO: 137; SEQ ID NO: 138; SEQ ID NO: 139; SEQ
 ID NO: 140; SEQ ID NO: 141; SEQ ID NO: 142; SEQ ID NO: 143; SEQ ID NO: 144; SEQ
 ID NO: 145; SEQ ID NO: 146; SEQ ID NO: 147; SEQ ID NO: 148; SEQ ID NO: 149; SEQ
 15 ID NO: 150; SEQ ID NO: 151; SEQ ID NO: 152; SEQ ID NO: 153; SEQ ID NO: 154; SEQ
 ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ
 ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ
 ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ
 ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ
 20 ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ
 ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ
 ID NO: 185; and SEQ ID NO: 186.

The present invention also provides a microarray comprising one or more protein-
 capture agents that bind one or more amino acid sequences encoded by all or a portion of one
 25 or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 47; SEQ
 ID NO: 60; SEQ ID NO: 67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO:
 77; SEQ ID NO: 78; SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID NO: 99;
 SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID NO: 131;
 SEQ ID NO: 150; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156;
 30 SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161;
 SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166;
 SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171;
 SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176;

SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

In yet another embodiment, a microarray may comprise one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; and SEQ ID NO: 211.

The present invention also provides a microarray comprising one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 78; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 239; SEQ ID NO: 271; SEQ ID NO: 285; and SEQ ID NO: 289.

In an alternative embodiment, a microarray may comprise one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 169; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 241; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314.

The present invention also provides a microarray comprising one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 64; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID NO: 320.

In yet another embodiment, a microarray comprises one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 104; SEQ ID NO: 123; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 219; SEQ ID NO: 267; SEQ ID NO: 270; SEQ ID NO: 279; SEQ ID NO:

280; SEQ ID NO: 283; SEQ ID NO: 291; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 325; SEQ ID NO: 326; and SEQ ID NO: 327.

The present invention further provides a microarray comprising one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 311; SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329.

In a specific embodiment, a microarray may comprise one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319.

The present invention also provides a microarray comprising one or more protein-capture agents that bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324.

In yet another embodiment, a microarray may comprise one or more protein-capture agents that substantially bind one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 37; SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 64; SEQ ID NO: 70; SEQ ID NO: 78; SEQ ID NO: 104; SEQ ID NO: 106; SEQ ID NO: 123; SEQ ID NO: 131; SEQ

ID NO: 138; SEQ ID NO: 150; SEQ ID NO: 158; SEQ ID NO: 160; SEQ ID NO: 165; SEQ
ID NO: 166; SEQ ID NO: 169; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ
ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ
ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ
5 ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ
ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ
ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; SEQ ID NO: 211; SEQ
ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 216; SEQ
ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 219; SEQ ID NO: 220; SEQ ID NO: 221; SEQ
10 ID NO: 222; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 225; SEQ ID NO: 226; SEQ
ID NO: 227; SEQ ID NO: 228; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ
ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 236; SEQ
ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 239; SEQ ID NO: 240; SEQ ID NO: 241; SEQ
ID NO: 242; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 245; SEQ ID NO: 246; SEQ
15 ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 250; SEQ ID NO: 251; SEQ
ID NO: 252; SEQ ID NO: 253; SEQ ID NO: 254; SEQ ID NO: 255; SEQ ID NO: 256; SEQ
ID NO: 257; SEQ ID NO: 258; SEQ ID NO: 259; SEQ ID NO: 260; SEQ ID NO: 261; SEQ
ID NO: 262; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 266; SEQ
ID NO: 267; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 271; SEQ
20 ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ
ID NO: 277; SEQ ID NO: 278; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 281; SEQ
ID NO: 282; SEQ ID NO: 283; SEQ ID NO: 284; SEQ ID NO: 285; SEQ ID NO: 286; SEQ
ID NO: 287; SEQ ID NO: 288; SEQ ID NO: 289; SEQ ID NO: 290; SEQ ID NO: 291; SEQ
ID NO: 293; SEQ ID NO: 294; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ
25 ID NO: 298; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 302; SEQ
ID NO: 303; SEQ ID NO: 304; SEQ ID NO: 305; SEQ ID NO: 306; SEQ ID NO: 307; SEQ
ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 310; SEQ ID NO: 311; SEQ ID NO: 312; SEQ
ID NO: 313; SEQ ID NO: 314; SEQ ID NO: 315; SEQ ID NO: 316; SEQ ID NO: 317; SEQ
ID NO: 318; SEQ ID NO: 320; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 323; SEQ
30 ID NO: 324; SEQ ID NO: 325; SEQ ID NO: 326; SEQ ID NO: 327; SEQ ID NO: 328; and
SEQ ID NO: 329

VII. Expression Profiles and Microarray Methods Of Use

In one aspect, the present invention provides methods for the reproducible measurement and assessment of the expression of specific mRNAs or proteins in a specific set of cells. One method combines and utilizes the techniques of laser capture
5 microdissection, T7-based RNA amplification, production of cDNA from amplified RNA, and DNA microarrays containing immobilized DNA molecules for a wide variety of specific genes to produce a profile of gene expression analysis for very small numbers of specific cells. The desired cells are individually identified and attached to a substrate by the laser capture technique, and the captured cells are then separated from the remaining cells. RNA is
10 then extracted from the captured cells and amplified about one million-fold using the T7-based amplification technique, and cDNA may be prepared from the amplified RNA. A wide variety of specific DNA molecules are prepared that hybridize with specific nucleic acids of the microarray, and the DNA molecules are immobilized on a suitable substrate. The cDNA made from the captured cells is applied to the microarray under conditions that allow
15 hybridization of the cDNA to the immobilized DNA on the array. The expression profile of the captured cells is obtained from the analysis of the hybridization results using the amplified RNA or cDNA made from the amplified RNA of the captured cells, and the specific immobilized DNA molecules on the microarray. The hybridization results demonstrate, for example, which genes of those represented on the microarray as probes are
20 hybridized to cDNA from the captured cells, and/or the amount of specific gene expression. The hybridization results represent the gene expression profile of the captured cells. The gene expression profile of the captured cells can be used to compare the gene expression profile of a different set of captured cells. The similarities and differences provide useful information for determining the differences in gene expression between different cell types,
-25 and differences between the same cell type under different conditions.

The techniques used for gene expression analysis are likewise applicable in the context of protein expression profiles. Total protein may be isolated from a cell sample and hybridized to a microarray comprising a plurality of protein-capture agents, which may include antibodies, receptor proteins, small molecules, and the like. Using any of several
30 assays known in the art, hybridization may be detected and analyzed as described above. In the case of fluorescent detection, algorithms may be used to extract a protein expression profile representative of the particular cell type.

The present invention further relates to gene expression profiles and protein expression profiles that define a particular cell or tissue, or a particular cell or tissue state, *e.g.* a normal or diseased state. Such “cell type specific gene expression profiles” comprise genes that are only expressed in a particular cell, *i.e.*, are differentially expressed between cells.

5 Similarly, cell type specific protein expression profiles comprise proteins that are only expressed in a particular cell, *i.e.*, are differentially expressed between cells. A cell type specific expression profile may define a particular cell type including its origin within the body and cellular state. For example, a cell type gene or protein expression profile may define an epithelial cell and more particularly, an epithelial cell located in a specific tissue, an
10 epithelial cell at a specific stage of the cell cycle, an epithelial cell in a specific state of differentiation, an epithelial cell in an activated state, and/or an epithelial cell in a particular diseased state. Thus, the methodologies, microarrays, and algorithms of the present invention may be used to determine the phenotype of an unknown cell sample.

Moreover, all of the cell type specific gene and/or protein expression profiles may be
15 compiled together in a database to be used for a variety of applications. For example, the profiles and the database may be used in methods for approximating cell type and cell number of a mixed population of cells. Armed with a database of cell type specific gene and/or protein expression profiles, a gene or protein expression profile constructed from a mixed population of cells may be compared against the profile database. Using the
20 algorithms of the present invention, a user may identify the number and type of cells comprising the mixed population.

In addition, the profiles and database may be used in creating cell type specific gene or protein microarrays. A microarray may be produced that comprises genes or protein-capture agents that represent all cell types or a specific set of cell types, for example, normal
25 colon cells and cancerous colon cells at different stages of disease progression.

The gene expression profiles, protein expression profiles, microarrays, and algorithms of the present invention may also be used to differentiate cell types (*e.g.*, neuron *v.* muscle cell). For example, mRNA isolated from two different cells may be hybridized to a microarray. The mRNA derived from each of the two cell types may be labeled with
30 different fluorophores so that they may be distinguished. *See e.g.*, Hacia et al., 26 NUCLEIC ACID RES. 3865-66, (1998); Schena et al., 270 SCIENCE 467-70 (1995). For example, mRNA from skeletal muscle cells may be synthesized using a fluorescein-12-UTP, and mRNA from neuronal cells, may be synthesized using biotin-16-UTP. The two mRNAs are then mixed

and hybridized to the microarray. The mRNA from skeletal muscle cells will, for example, fluoresce green when the fluorophore is stimulated and the mRNA from neuronal cells will, for example, fluoresce red. The relative signal intensity from each mRNA is determined, and an expression profile for each mRNA is generated and used to identify the cell type. An
5 advantage of using mRNA labeled with two different fluorophores is that a direct and internally controlled comparison of the mRNA levels corresponding to each arrayed gene in the two cell types can be made, and variations due to minor differences in experimental conditions (*e.g.*, hybridization conditions) will not affect subsequent analyses.

In one aspect, the present invention provides gene and protein expression profile
10 useful for identifying specific cell types. For example, the present invention contemplates gene and protein expression profiles generated from numerous cell types including, but not limited to, coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial
15 epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth
20 muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

Furthermore, the expression profiles and microarrays of the present invention may be used to distinguish normal tissue from diseased tissue, and in particular normal tissue from tumorigenic tissue. In addition, the present invention may also be used for patient diagnosis. Specifically, a patient sample may be hybridized to a microarray representing normal and
25 diseased tissues. The resulting expression pattern of the patient sample may then be compared to the expression profile of a normal tissue sample to determine the disease progression status. For example, alterations in the level of expression of the prostate-specific antigen (PSA) may be indicative of prostate cancer and variations of the carcino-embryonic antigen (CEA) may be indicative of colon cancer.

30 The present invention also relates to methods of using the expression profiles and microarrays. For example, the gene expression profiles and protein expression profiles and microarrays may be used for drug and toxicity screening. Drugs often have side effects that are, in part, due to the lack of target specificity. *In vitro* assays provide limited information

on the specificity of a compound. In contrast, a microarray may reveal the spectrum of genes or proteins affected by a particular drug compound. In considering two different compounds both of which demonstrate specificity for a target protein (*e.g.*, a receptor), if one compound affects the expression of ten genes or proteins and a second compound affects the expression of fifty genes or proteins, the first compound is more likely to have fewer side effects.

Because the identity of the genes or proteins is known or determinable, information on other affected genes is informative as to the nature of the side effects. A panel of genes or proteins may be used to test derivatives of a lead compound to determine which of the derivatives have greater specificity than the first compound.

Thus, microarray technology may be used to identify drug compounds that regulate gene and/or protein expression or possess similar mechanisms of action. This technology may also be used to create microarrays that model various diseases and in turn, novel drug compounds may be analyzed as potential therapeutics. In addition, microarrays may be generated that comprise the genes or proteins of one or more of a particular pathogen (*e.g.*, bacteria, viruses, fungi). These microarrays may then be utilized to identify promising antibiotics, antiviral, or antifungal agents.

In another embodiment of the invention, a microarray corresponding to a population of genes or proteins isolated from a particular tissue or cell type is used to detect changes in gene transcription or protein expression which result from exposing the selected tissue or cells to a candidate drug. In this embodiment, tissue or cells derived from an organism, or an established cell line, may be exposed to the candidate drug *in vivo* or *ex vivo*. Thereafter, the gene transcripts, primarily mRNA, of the tissue or cells are isolated by methods well-known in the art. *See, e.g.*, SAMBROOK ET AL. (1989). The isolated transcripts or cDNAs complementary to the mRNA are then contacted with a microarray, each microarray probe being specific for a different transcript, under conditions where the transcripts hybridize with a corresponding probe to form hybridization pairs. Similarly, protein may be isolated by methods well-known in the art. The isolated protein sample is then hybridized to a microarray comprising a plurality of protein-capture agents. The microarrays may provide, in aggregate, an ensemble of genes or proteins of the tissue or cell type sufficient to model the transcriptional and/or translational responsiveness of a drug candidate. A hybridization signal may then be detected at each hybridization pair to obtain an expression profile. This profile of the drug-stimulated cells may then be compared with an expression profile of control cells to obtain a specific drug response profile.

Similarly, for toxicity screening, a cell line or animal (*e.g.*, rat) may be treated with a particular toxin (*e.g.*, carcinogen, immunotoxin, cytotoxin, teratogen, pesticide) to determine its effects on gene expression. As described above, RNA or protein may be isolated from the treated cell line or a tissue (*e.g.*, liver) from the treated animal, and hybridized to a microarray
5 containing oligonucleotide probes or protein-capture agents. The resulting expression profiles may be compared to profiles generated from an untreated animal or cell line. An analysis of the expression pattern of the treated samples may reflect the effects of the particular toxin on gene expression, and possibly predict physiological effects.

This data may be used to identify genetic response profiles. Individual gene or
10 protein responses may be sorted to determine the specificity of each gene or protein to a particular stimulus. An expression profile may be established which weighs the signal patterns proportionally to the specificity of the response. Response profiles for an unknown stimulus (*e.g.*, new chemicals, unknown compounds) may be analyzed by comparing the new stimulus response profiles with response profiles to known chemical stimuli. If there is a
15 gene or protein match, then the response profile identifies a stimulus with the same target as one of the known compounds upon which the response profile database is based. For drug screening, if the response profile is a subset of cells in the support stimulated by a known compound, the new compound may be a candidate for a molecule with greater specificity than the reference compound.

Gene and/or protein expression profiles and microarrays may also be used to identify
20 activating or non-activating compounds. Compounds that increase transcription rates or stimulate the activity of a protein are considered activating, and compounds that decrease rates or inhibit the activity of a protein are non-activating. The biological effects of a compound may be reflected in the biological state of a cell. This state is characterized by the
25 cellular constituents. One aspect of the biological state of a cell is its transcriptional state. The transcriptional state of a cell includes the identities and amounts of the constituent RNA species, especially mRNAs, in the cell under a given set of conditions. Thus, the gene expression profiles, microarrays, and algorithms of the present invention may be used to analyze and characterize the transcriptional state of a given cell or tissue following exposure
30 to an activating or non-activating compound.

The gene expression profiles, microarrays, and algorithms of the present invention may also be used to identify the components of cell signaling pathways. A cell signaling pathway is generally understood to be a collection of the cellular constituents (*e.g.*, DNA,

RNA, receptors, second messenger proteins, enzymes). The cellular constituents of a particular signaling pathway may be identified, for example, by variations in the transcription or translation rates. Each cellular constituent is typically influenced by at least one other cellular constituent. Thus, a cell may be exposed to a compound that interacts with a specific cellular constituent. For example, the cell may be exposed to varying concentrations of a specific receptor agonist. An analysis of variations in gene and/or protein expression as compared to an unexposed cell may reveal components of that particular receptor-signaling pathway. Thus, the cellular constituents that vary in a correlated pattern as the concentrations of the drug are increased may be identified as a component of the pathway originating at that drug.

The present invention may also be used to identify co-regulated genes. Similar variations in the transcriptional rate of a particular group of genes may reflect that these genes are similarly regulated. Thus, analysis of the transcriptional state of these genes may be accomplished by hybridization to microarrays. The level of hybridization to the microarray reflects the prevalence of the mRNA transcripts in the cell and may be used to determine if particular genes are co-regulated.

In another embodiment, the gene expression profiles and microarrays of the present invention may also be used to identify a class of diseases. For example, gene expression profiles or protein expression profiles may be used to distinguish tumor types (*e.g.*, lymphomas). By monitoring gene or protein expression, it may be possible to distinguish, for example, Hodgkin lymphoma from non-Hodgkin lymphoma. By identifying the lymphoma type, the appropriate clinical course may be implemented.

In addition, new tumor-associated genes or proteins may be identified by systemically comparing the expression of genes in tumor specimens with their expression in control tissue. For example, genes with elevated levels in tumor cells relative to normal cells, are candidates for genes encoding growth-promoting products (*e.g.*, oncogenes). In contrast, genes with reduced expression levels in tumors, are candidates for genes encoding growth-inhibiting products (*e.g.*, tumor suppressor genes or genes encoding apoptosis-inducing products). Thus, the expression profiles may point to the physiological function or malfunction of the gene product in the organism and shed light on possible treatments.

In a specific embodiment, the present invention provides endothelial cell gene expression profiles comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group

consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO: 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144.

In another embodiment, a muscle cell gene expression profile may comprise one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69.

In an alternative embodiment, a primary cell gene expression profile comprises one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43; SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO: 59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID NO: 63; SEQ ID NO: 64; SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 79; SEQ ID NO: 80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID NO: 83; SEQ ID NO: 84; SEQ ID NO: 85; SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO: 88; SEQ ID NO: 89; SEQ ID NO: 90; SEQ ID NO: 91; SEQ ID NO: 92; SEQ

ID NO: 93; SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID NO: 96; SEQ ID NO: 97; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 100; SEQ ID NO: 101; SEQ ID NO: 102; SEQ ID NO: 103; SEQ ID NO: 104; SEQ ID NO: 105; SEQ ID NO: 106; SEQ ID NO: 107; SEQ ID NO: 108; SEQ ID NO: 109; SEQ ID NO: 110; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 113; SEQ ID NO: 114; SEQ ID NO: 115; SEQ ID NO: 116; SEQ ID NO: 118; SEQ ID NO: 119; SEQ ID NO: 120; SEQ ID NO: 121; SEQ ID NO: 122; SEQ ID NO: 123; SEQ ID NO: 124; SEQ ID NO: 125; SEQ ID NO: 126; SEQ ID NO: 127; SEQ ID NO: 128; SEQ ID NO: 129; SEQ ID NO: 130; SEQ ID NO: 131; SEQ ID NO: 132; SEQ ID NO: 133; SEQ ID NO: 134; SEQ ID NO: 135; SEQ ID NO: 136; SEQ ID NO: 137; SEQ ID NO: 138; SEQ ID NO: 139; SEQ ID NO: 140; SEQ ID NO: 141; SEQ ID NO: 142; SEQ ID NO: 143; SEQ ID NO: 144; SEQ ID NO: 145; SEQ ID NO: 146; SEQ ID NO: 147; SEQ ID NO: 148; SEQ ID NO: 149; SEQ ID NO: 150; SEQ ID NO: 151; SEQ ID NO: 152; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

The present invention also provides an epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of: SEQ ID NO: 47; SEQ ID NO: 60; SEQ ID NO: 67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

In yet another embodiment, a keratinocyte epithelial cell gene expression profile may comprise one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; and SEQ ID NO: 211.

The present invention also provides a mammary epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 78; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 239; SEQ ID NO: 271; SEQ ID NO: 285; and SEQ ID NO: 289.

In an alternative embodiment, a bronchial epithelial cell gene expression profile may comprise one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 169; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 241; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314.

The present invention also provides a prostate epithelial cell gene expression profile, which may comprise one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 64; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID NO: 320.

In yet another embodiment, a renal cortical epithelial cell gene expression profile may comprise one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 104; SEQ ID NO: 123; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 219; SEQ ID NO: 267; SEQ ID NO: 270; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 283; SEQ ID NO: 291; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 325; SEQ ID NO: 326; and SEQ ID NO: 327.

The present invention further provides renal proximal tubule epithelial cell gene expression profiles comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 311; SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329.

In a specific embodiment, a small airway epithelial cell gene expression profile may comprise one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319.

The present invention also provides a renal epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group consisting of SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324.

In a specific embodiment, the present invention provides an endothelial cell protein expression profile comprising one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID

NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO: 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144.

The present invention also provides a muscle cell protein expression profile
 5 comprising one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID
 10 NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69.

In another embodiment, a primary cell protein expression profile may comprise one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9;
 15 SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ
 20 ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43; SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO: 59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID
 25 NO: 63; SEQ ID NO: 64; SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 79; SEQ ID NO: 80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID NO: 83; SEQ ID NO: 84; SEQ ID NO: 85; SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO: 88; SEQ ID NO:
 30 89; SEQ ID NO: 90; SEQ ID NO: 91; SEQ ID NO: 92; SEQ ID NO: 93; SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID NO: 96; SEQ ID NO: 97; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 100; SEQ ID NO: 101; SEQ ID NO: 102; SEQ ID NO: 103; SEQ ID NO: 104; SEQ ID NO: 105; SEQ ID NO: 106; SEQ ID NO: 107; SEQ ID NO: 108; SEQ ID NO: 109; SEQ

ID NO: 110; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 113; SEQ ID NO: 114; SEQ
 ID NO: 115; SEQ ID NO: 116; SEQ ID NO: 118; SEQ ID NO: 119; SEQ ID NO: 120; SEQ
 ID NO: 121; SEQ ID NO: 122; SEQ ID NO: 123; SEQ ID NO: 124; SEQ ID NO: 125; SEQ
 ID NO: 126; SEQ ID NO: 127; SEQ ID NO: 128; SEQ ID NO: 129; SEQ ID NO: 130; SEQ
 5 ID NO: 131; SEQ ID NO: 132; SEQ ID NO: 133; SEQ ID NO: 134; SEQ ID NO: 135; SEQ
 ID NO: 136; SEQ ID NO: 137; SEQ ID NO: 138; SEQ ID NO: 139; SEQ ID NO: 140; SEQ
 ID NO: 141; SEQ ID NO: 142; SEQ ID NO: 143; SEQ ID NO: 144; SEQ ID NO: 145; SEQ
 ID NO: 146; SEQ ID NO: 147; SEQ ID NO: 148; SEQ ID NO: 149; SEQ ID NO: 150; SEQ
 ID NO: 151; SEQ ID NO: 152; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ
 10 ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ
 ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ
 ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ
 ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ
 ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ
 15 ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and
 SEQ ID NO: 186.

In yet another embodiment, an epithelial cell protein expression profile may comprise
 one or more amino acid sequences encoded by all or a portion of one or more nucleic acid
 sequences selected from the group consisting of SEQ ID NO: 47; SEQ ID NO: 60; SEQ ID
 20 NO:67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO:
 78; SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 111;
 SEQ ID NO: 112; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID NO: 131; SEQ ID NO: 150;
 SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157;
 SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162;
 25 SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167;
 SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172;
 SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177;
 SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182;
 SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

30 The present invention further provides a keratinocyte epithelial cell protein expression
 profile comprising one or more amino acid sequences encoded by all or a portion of one or
 more nucleic acid sequences selected from the group consisting of SEQ ID NO: 187; SEQ ID
 NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID

NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; and SEQ ID NO: 211.

5 In another embodiment, a mammary epithelial cell protein expression profile may comprise one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 78; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 239; SEQ ID NO: 271; SEQ ID NO: 285; and SEQ ID NO: 289.

10 Still further, the present invention provides a bronchial epithelial cell protein expression profile comprising one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 169; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 241; SEQ ID NO: 243; SEQ ID NO: 244; 15 SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314.

In yet another embodiment, a prostate epithelial cell protein expression profile comprises one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 64; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID 20 NO: 320.

The present invention also provides a renal cortical epithelial cell protein expression profile comprising one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 104; SEQ ID NO: 123; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID 25 NO: 166; SEQ ID NO: 219; SEQ ID NO: 267; SEQ ID NO: 270; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 283; SEQ ID NO: 291; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 325; SEQ ID NO: 326; and SEQ ID NO: 327.

In an alternative embodiment, a renal proximal tubule epithelial cell protein expression profile may comprise one or more amino acid sequences encoded by all or a 30 portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID

NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 311; SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329.

5 The present invention also provides a small airway epithelial cell protein expression profile comprising one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID
10 NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID
15 NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319.

 In a further embodiment, a renal epithelial cell protein expression profile comprises one or more amino acid sequences encoded by all or a portion of one or more nucleic acid sequences selected from the group consisting of SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID
20 NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324.

 In addition, the protein expression profiles may be used to create a database and to create specific protein microarrays. Furthermore, the protein microarrays, protein expression profiles, and protein expression profile databases may be useful for epitope mapping, the study of protein-protein interaction, binding of drug candidates to a plurality of proteins,
25 drug-drug interaction (*e.g.*, competition binding studies of two drug candidates), binding of a plurality of drug candidates to a single or several proteins, diagnostics, or antigen mapping.

VIII. High Information Density Genes And Proteins

 Although it is possible to analyze the expression of all genes expressed in a cell, a significant number of genes are expressed so infrequently and thus are of limited value in
30 generating gene expression profiles. On the other hand, a number of genes are sufficiently expressed in a cell or differentially expressed between cells to make them useful in analyzing gene expression data. Accordingly, the present invention further provides methods for identifying the subset of genes or proteins that provides the most utility in analyzing gene and

protein expression. This subset is termed “high information density genes” and “high information density proteins” and may be used to build microarrays useful for analyzing gene and protein expression and generating gene expression profiles and protein expression profiles.

5 Indeed, the construction of microarrays comprising nucleic acid sequences or protein-capture agents that represent high information density genes or proteins provides a means for efficiently analyzing gene or protein expression. For example, such microarrays may be universally useful for diagnosing one or many diseases. The high information density gene or protein microarrays of the present invention may comprise the least number of genes or
10 protein-capture agents that are the most useful to researchers and healthcare providers. The microarray may include the least number of genes or protein-capture agents that produce the most specific results with the highest accuracy, specificity, and sensitivity.

More particularly, high information density genes or proteins may be identified by assessing the information content of one or more genes comprising one or more gene
15 expression profiles or one or more proteins comprising one or more protein expression profiles. Genes or proteins providing the highest amount of information content comprise high information density genes or proteins. A high information density gene or protein provides more “information” about a particular tissue type and/or tissue state, as opposed to a gene or protein that is expressed infrequently and, therefore, is of limited value in
20 expression analyses.

Information content may be based upon, but not limited to, the magnitude of response of a gene or protein relative to a reference state or a separate reference gene or protein. For example, the reference state may be baseline expression at a certain time point, such as prior to treatment, or may refer to a physiological state, such as being healthy or status prior to
25 treatment. Another basis for assessing information content is the frequency of detected expression across categories of tissue, diseases, or patients compared to a reference category such as unstimulated or uninfected patients. Information content may also refer to changes in expression levels relative to categories of cells, tissues, organs, or patients.

Methods for identifying high information density genes or proteins that may be used
30 to generate the high information density expression profiles, via the use of microarrays comprising nucleic acids or protein-capture agents representing such genes or proteins, involve algorithms that generate the high information density expression profiles. Using algorithms, genes or proteins may be ranked against each other to determine the relative

information content of each gene or protein analyzed. For example, the basis for ranking genes for information content may be an algorithm adding together the number of times the gene or protein is expressed among all categories and time-points, then dividing that number by the sample set size. Furthermore, information content may be subcategorized using an algorithm that ranks the average change in expression level in all instances in which the gene or protein was expressed by the average number of times expressed.

High information density genes or proteins may be selected using an algorithm that ranks expression levels across all tissues, stimuli, and times with weighing in favor of expression that may be greatly increased or decreased among the sets. For example, high information density genes or proteins may be selected using an algorithm that correlates about 90% gene or protein expression in all cell lines or tissues with greater than about a 50% increase or decrease in expression occurring through time or after treatment with all stimuli.

High information density genes or proteins may also be selected using an algorithm that correlates a unique expression profile observed in a single cell line or tissue to a specific disease state for diagnosis or correlates to a treatment modality that may predict a positive or negative outcome. An algorithm that correlates a change in the expression profile in a single cell line or tissue to a specific disease state for diagnosis or a treatment modality that may predict a positive or negative outcome may be used as well. Further, an algorithm that correlates a change in a combination of expression profiles in a single cell line or tissue to a specific disease state for diagnosis, or a treatment modality that may predict a positive or negative outcome, may be used to select high information density genes or proteins.

High information density genes or proteins may be selected from categories that are based on patient characteristics including, for example, gender, age, disease-state, and treatment regime. Another basis for selecting high information density genes or proteins is the time of gene expression. This may include, for example, different times in a disease course, different times after stimuli exposure, different times in organismal development, or different times in the cell cycle. Another selection basis may be an increase or decrease in gene or protein expression in response to a stimulus. For example, the stimulus may include environmental alteration, viral or bacterial infection, drug exposure, protein activation, protein deactivation, chemical exposure, and cell isolation procedure.

Of the various stimuli, environmental alterations may include alterations such as changes in temperature, gas pressure, gas concentration, osmolarity, humidity, and pH. Viral stimuli may include, for example, infection with different viruses such as papilloma viruses,

lentiviruses, retroviruses, hepadnaviruses, alphaviruses, flaviviruses, rhabdoviruses, herpesviruses, adenoviruses, picornaviruses, reoviruses, coronaviruses, pox viruses, paramyxoviruses, togaviruses, and arenaviruses. Bacterial stimuli may include, but may not be limited to, lipopolysaccharide, formylmethionine, bacterial heat shock proteins and
5 lipoteichoic acid.

Drug exposure stimuli may include, for example, metabolic regulators, calcium ionophores, G protein regulators, translation regulators, and transcription regulators. Protein stimuli may include proteins such as cytokines, matrix proteins, cell surface ligands, acute phase proteins, clotting factors, vasoactive proteins, and mismatched Major
10 Histocompatibility antigens among others. Examples of chemical stimuli include organic compounds, inorganic compounds, metals, and other chemical elements. Examples of cell isolation-procedures stimuli include density gradient purification, chemical digestion, mechanical disaggregation, and centrifugation.

Once identified, the high information density genes may be used to create high
15 information density gene microarrays. Similarly, high information density proteins may be used to create high information density protein microarrays. The high information density microarrays may represent a particular tissue type, such as heart, liver, prostate, lung, nerve, muscle, or connective tissue; coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium,
20 pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle,
25 mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

The high information density microarrays may be used in the applications described in the present application. For example, the high information density microarrays may be used to diagnose a patient and predict treatment effectiveness. The microarray may comprise
30 the fewest genes or protein-capture agents necessary to produce the most accurate, reproducible, and specific results that correlate to a positive outcome. Once a treatment course begins, the microarray may be used to generate a gene expression profile or a protein expression profile that correlates to a particular outcome. The clinician may then use this

information to adjust or change therapy accordingly. The microarray itself may contain genes or protein-capture agents that provide the highest amount of information on at least one type but possibly all therapies, for at least one but possibly all diseases.

Used in diagnostic applications, the high-information density microarray may be compared to standard diagnostic pathologies. Specificity, sensitivity, accuracy, predictive value, and standard error of the microarray may be assessed, as well as confidence intervals and prevalence of a disease in a population using standard techniques. Such diagnostic microarrays may be validated based on at least one of the following parameters or combinations thereof described below, wherein “a” represents the number of true positives, “b” represents the number of false positives, “c” represents the number of false negatives, and “d” represents the number of true negatives.

For example, sensitivity may be defined as $a/a+c \times 100$ and indicates the percentage of individuals with the disease that have positive test results. Specificity may be defined as $d/b+d$ and indicates the percentage of individuals who do not have the particular disease and have negative test results. Accuracy (efficiency) may be defined as $a+d/a+b+c+d \times 100$ and may be the percentage of true positive and true negative test results that are correctly identified by the test. Prevalence may be defined as $a+c/a+b+c+d \times 100$ and may be the frequency of disease in the population at a given time based on the incidence of disease per year per 100,000 people.

Positive predictive value may be defined as $a/a+b \times 100$ and may be the percentage of true positive test results based on the prevalence of disease in the population. Negative predictive value may be defined as $d/c+d \times 100$ and may be the percentage of true negative test results based on the prevalence of disease in the population.

The standard error (SE) of the diagnostic microarrays may be calculated using the following formula: $SE = ((p) \times ((1-p)/n))^{1/2}$, where p = sensitivity of the test and n = sample size. The 95% confidence interval may be calculated by the formula: $p - (1.96 \times SE)$ to $p + (1.96 \times SE)$, where p = sensitivity of the test and “1.96” may be derived from statistical tables. The high information density microarray may have a gene or combination of genes or a protein-capture agent or a combination of protein-capture agents that yield the highest sensitivity, specificity and accuracy over the widest range of standards, and also offers the best positive and negative predictive value for the most applications.

In another embodiment, a high information-density microarray may comprise the genes or protein-capture agents that best diagnose leukemia in the most patients with the

highest accuracy. Such diagnostic genes may be 100% sensitive, 100% specific and 100% accurate. A microarray may also include a combination of genes or protein-capture agents that together, rather than individually, yield high sensitivity, specificity, and accuracy, thus diagnosing leukemia with 100% sensitivity, specificity and accuracy. For example, any two
5 separate genes or protein-capture agents may only offer 50% or less sensitivity, specificity, or accuracy for diagnosis leukemia individually, but if combined on the same microarray the specificity may reach 100% because these genes or proteins are only found together when the patient has leukemia. Hence, the gene or combination of genes or protein or combination of proteins that yield the highest information content on leukemia diagnosis may be included on
10 the microarray.

For predicting treatment efficiency, the microarray may contain the genes or protein-capture agents that best predict treatment outcome for leukemia in patients. An expression profile specific for either positive or negative treatment outcome may be 100% sensitive, 100% specific and 100% accurate. A microarray may also include a combination of genes or
15 protein-capture agents that together, rather than individually, predict outcomes of treatments with 100% sensitivity, specificity, and accuracy. For example, any two separate genes or protein-capture agents may only offer 50% or less sensitivity, specificity, or accuracy for outcomes of various treatment modalities for leukemia individually, but when they are combined the microarray may indicate the outcome of a specific patient treatment with
20 sufficient, preferably 100%, accuracy. Thus, the combinations that yield the highest information content on leukemia treatment modality may be included on the microarray.

The high information-density microarrays may be used for indicating when, for example, erythropoietin (EPO) treatment would be appropriate for a patient or for monitoring drug effectiveness during such treatment. The expression profiles used on the microarray
25 may be one gene or protein-capture agent that may be 100% specific, 100% sensitive, and 100% accurate for indicating when EPO may be provided as a treatment or determining EPO treatment effectiveness or a combination of genes or protein-capture agents that provides the same accuracy. Accordingly, the microarray can provide valuable information on when EPO is appropriate as a course of treatment and when EPO is effective in that treatment. In like
30 manner, a microarray may be used for indicating when cytokine treatment, such as Interleukin 5, Granulocyte Stimulating Factor, Interleukin 2, and Interleukin 12, would be appropriate for a patient during or after chemotherapy or radiation therapy, or for monitoring drug effectiveness during such treatment.

Cancer treatment is an important field in which these types of microarrays may efficiently be used to indicate when a patient has cancer, the type of cancer the patient has, as well as the best treatment modality and prognosis of the patient. The microarray may also be used to monitor drug effectiveness during cancer treatment by measuring whether cancer is present and to what extent. As an example, and without limitation, the microarray may be used for indicating when a patient has Human Immunodeficiency Virus (HIV), the best treatment modality for that patient, and the prognosis of the patient. By measuring whether HIV is present and to what extent, a microarray containing expression profiles from either the host or pathogen may be used as well to monitor drug effectiveness during HIV treatment.

The nucleic acid and protein microarrays of the present invention may be useful as a diagnostic tool in assessing the effects of treatment with a compound on relative gene and protein expression. In one embodiment of the present invention, the methods described herein may be used to assess the pharmacological effects of one or more of the following growth factors, proteins, cytokines or peptides. The genes and protein-capture agents of the present invention may be specific to such growth factors, proteins, cytokines, and peptides or relate to their expression levels.

Briefly, growth factors are hormones or cytokine proteins that bind to receptors on the cell surface, with the primary result of activating cellular proliferation and/or differentiation. Many growth factors are quite versatile, stimulating cellular division in numerous different cell types, while others are specific to a particular cell-type. The following Table 1 presents several factors, but is not intended to be comprehensive or complete, yet introduces some of the more commonly known factors and their principal activities.

Table 1: Growth Factors

Factor	Principal Source	Primary Activity	Comments
Platelet Derived Growth Factor (PDGF)	Platelets, endothelial cells, placenta.	Promotes proliferation of connective tissue, glial and smooth muscle cells. PDGF receptor has intrinsic tyrosine kinase activity.	Dimer required for receptor binding. Two different protein chains, A and B, form 3 distinct dimer forms.
Epidermal Growth Factor (EGF)	Submaxillary gland, Brunners gland.	promotes proliferation of mesenchymal, glial and epithelial cells	EGF receptor has tyrosine kinase activity, activated in response to EGF binding.
Fibroblast Growth Factor	Wide range of cells; protein is associated with	Promotes proliferation of many cells including skeletal	Four distinct receptors, all with

(FGF)	the ECM; nineteen family members. Receptors widely distributed in bone, implicated in several bone-related diseases.	and nervous system; inhibits some stem cells; induces mesodermal differentiation. Non-proliferative effects include regulation of pituitary and ovarian cell function.	tyrosine kinase activity. FGF implicated in mouse mammary tumors and Kaposi's sarcoma.
NGF		Promotes neurite outgrowth and neural cell survival	Several related proteins first identified as proto-oncogenes; trkA (<i>trackA</i>), trkB, trkC
Erythropoietin (Epo)	Kidney	Promotes proliferation and differentiation of erythrocytes	Also considered a 'blood protein,' and a colony stimulating factor.
Transforming Growth Factor α (TGF- α)	Common in transformed cells, found in macrophages and keratinocytes	Potent keratinocyte growth factor.	Related to EGF.
Transforming Growth Factor γ (TGF- β)	Tumor cells, activated TH ₁ cells (T-helper) and natural killer (NK) cells	Anti-inflammatory (suppresses cytokine production and class II MHC expression), proliferative effects on many mesenchymal and epithelial cell types, may inhibit macrophage and lymphocyte proliferation.	Large family of proteins including activin, inhibin and bone morpho-genetic protein. Several classes and subclasses of cell-surface receptors
Insulin-Like Growth Factor-I (IGF-I)	Primarily liver, produced in response to GH and then induces subsequent cellular activities, particularly on bone growth	Promotes proliferation of many cell types, autocrine and paracrine activities in addition to the initially observed endocrine activities on bone.	Related to IGF-II and proinsulin, also called Somatomedin C. IGF-I receptor, like the insulin receptor, has intrinsic tyrosine kinase activity. IGF-I can bind to the insulin receptor.
Insulin-Like Growth Factor-II (IGF-II)	Expressed almost exclusively in embryonic and neonatal tissues.	Promotes proliferation of many cell types primarily of fetal origin. Related to IGF-I and proinsulin.	IGF-II receptor is identical to the mannose-6-phosphate receptor that is responsible for the integration of lysosomal enzymes

Additional growth factors that may be utilized within the methodologies of the present invention include insulin and proinsulin (U.S. Patent No. 4,431,740); Activin (Vale et al., 321 NATURE 776 (1986); Ling et al., 321 NATURE 779 (1986)); Inhibin (U.S. Patent Nos. 4,740,587; 4,737,578); and Bone Morphogenic Proteins (BMPs) (U.S. Patent No. 5,846,931; WOZNEY, CELLULAR & MOLECULAR BIOLOGY OF BONE 131-167 (1993)).

Additional growth factors that may be utilized within the methodologies of the present invention include Activin (Vale et al., 321 NATURE 776 (1986); Ling et al., 321 NATURE 779 (1986)), Inhibin (U.S. Patent Nos. 4,737,578; 4,740,587), and Bone Morphogenic Proteins (BMPs) (U.S. Patent No. 5,846,931; WOZNEY, CELLULAR & MOLECULAR BIOLOGY OF BONE 131-67 (1993)).

In another embodiment, the methodologies of the present invention may be used to assess the pharmacological effects a cytokine or cytokine receptor on a patient or cell line. Secreted primarily from leukocytes, cytokines stimulate both the humoral and cellular immune responses, as well as the activation of phagocytic cells. Cytokines that are secreted from lymphocytes are termed lymphokines, whereas those secreted by monocytes or macrophages are termed monokines. A large family of cytokines are produced by various cells of the body. Many of the lymphokines are also known as interleukins (ILs), because they are not only secreted by leukocytes, but are also able to affect the cellular responses of leukocytes. More specifically, interleukins are growth factors targeted to cells of hematopoietic origin. The list of identified interleukins grows continuously. *See, e.g.*, U.S. Patent No. 6,174,995; U.S. Patent No. 6,143,289; Sallusto et al., 18 ANNU. REV. IMMUNOL. 593 (2000); Kunkel et al., 59 J. LEUKOCYTE BIOL. 81 (1996).

Additional growth factor/cytokines encompassed in the methodologies of the present invention include pituitary hormones such as CEA, FSH, FSH α , FSH β , Human Chorionic Gonadotrophin (HCG), HCG α , HCG β , uFSH (urofollitropin), GH, LH, LH α , LH β , PRL, TSH, TSH α , TSH β , and CA, parathyroid hormones, follicle stimulating hormones, estrogens, progesterones, testosterone, or structural or functional analog thereof. All of these proteins and peptides are known in the art. Many may be obtained commercially from, e.g., Research Diagnostics, Inc. (Flanders, N.J.).

The cytokine family also includes tumor necrosis factors, colony stimulating factors, and interferons. *See, e.g.*, Cosman, 7 BLOOD CELL (1996); Gruss et al., 85 BLOOD 3378 (1995); Beutler et al., 7 ANNU. REV. IMMUNOL. 625 (1989); Aggarwal et al., 260 J. BIOL. CHEM. 2345 (1985); Pennica et al., 312 NATURE 724 (1984); R & D Systems, CYTOKINE MINI-REVIEWS, at <http://www.rndsystems.com>.

Several cytokines are introduced, briefly, in Table 2 below.

Table 2: Cytokines

Cytokine	Principal Source	Primary Activity
Interleukins	Primarily macrophages but also neutrophils, endothelial cells, smooth	Costimulation of APCs and T cells; stimulates IL-2 receptor production and

IL1- α and - β	muscle cells, glial cells, astrocytes, B- and T-cells, fibroblasts, and keratinocytes.	expression of interferon- γ ; may induce proliferation in non-lymphoid cells.
IL-2	CD4 ⁺ T-helper cells, activated TH ₁ cells, NK cells.	Major interleukin responsible for clonal T-cell proliferation. IL-2 also exerts effects on B-cells, macrophages, and natural killer (NK) cells. IL-2 receptor is not expressed on the surface of resting T-cells, but expressed constitutively on NK cells, that will secrete TNF- α , IFN- γ and GM-CSF in response to IL-2, which in turn activate macrophages.
IL-3	Primarily T-cells	Also known as multi-CSF, as it stimulates stem cells to produce all forms of hematopoietic cells.
IL-4	TH ₂ and mast cells	B cell proliferation, eosinophil and mast cell growth and function, IgE and class II MHC expression on B cells, inhibition of monokine production
IL-5	TH ₂ and mast cells	eosinophil growth and function
IL-6	Macrophages, fibroblasts, endothelial cells and activated T-helper cells. Does not induce cytokine expression.	IL-6 acts in synergy with IL-1 and TNF- α in many immune responses, including T-cell activation; primary inducer of the acute-phase response in liver; enhances the differentiation of B-cells and their consequent production of immunoglobulin; enhances Glucocorticoid synthesis.
IL-7	thymic and marrow stromal cells	T and B lymphopoiesis
IL-8	Monocytes, neutrophils, macrophages, and NK cells.	Chemoattractant (chemokine) for neutrophils, basophils and T-cells; activates neutrophils to degranulate.
IL-9	T cells	hematopoietic and thymopoietic effects
IL-10	activated TH ₂ cells, CD8 ⁺ T and B cells, macrophages	inhibits cytokine production, promotes B cell proliferation and antibody production, suppresses cellular immunity, mast cell growth
IL-11	stromal cells	synergistic hematopoietic and thrombopoietic effects
IL-12	B cells, macrophages	proliferation of NK cells, INF- γ production, promotes cell-mediated immune functions
IL-13	TH ₂ cells	IL-4-like activities
IL-18	macrophages/Kupffer cells, keratinocytes, glucocorticoid-secreting adrenal cortex cells, and osteoblasts	Interferon-gamma-inducing factor with potent pro-inflammatory activity
IL-21	Activated T cells	IL21 has a role in proliferation and maturation of natural killer (NK) cell populations from bone marrow, in the proliferation of mature B-cell populations co-stimulated with anti-CD40, and in the proliferation of T cells co-stimulated with

		anti-CD3.
IL-23	Activated dendritic cells	A complex of p19 and the p40 subunit of IL-12. IL-23 binds to IL-12R beta 1 but not IL-12R beta 2; activates Stat4 in PHA blast T cells; induces strong proliferation of mouse memory T cells; stimulates IFN-gamma production and proliferation in PHA blast T cells, as well as in CD45RO (memory) T cells.
Tumor Necrosis Factor TNF- α	Primarily activated macrophages.	Once called cachectin; induces the expression of other autocrine growth factors, increases cellular responsiveness to growth factors; induces signaling pathways that lead to proliferation; induces expression of a number of nuclear proto-oncogenes as well as of several interleukins.
(TNF- β)	T-lymphocytes, particularly cytotoxic T-lymphocytes (CTL cells); induced by IL-2 and antigen-T-Cell receptor interactions.	Also called lymphotoxin; kills a number of different cell types, induces terminal differentiation in others; inhibits lipoprotein lipase present on the surface of vascular endothelial cells.
Interferons INF- α and - β	macrophages, neutrophils and some somatic cells	Known as type I interferons; antiviral effect; induction of class I MHC on all somatic cells; activation of NK cells and macrophages.
Interferon INF- γ	Primarily CD8 ⁺ T-cells, activated TH ₁ and NK cells	Type II interferon; induces of class I MHC on all somatic cells, induces class II MHC on APCs and somatic cells, activates macrophages, neutrophils, NK cells, promotes cell-mediated immunity, enhances ability of cells to present antigens to T-cells; antiviral effects.
Monocyte Chemoattractant Protein-1 (MCP1)	Peripheral blood monocytes/macrophages	Attracts monocytes to sites of vascular endothelial cell injury, implicated in atherosclerosis.
Colony Stimulating Factors (CSFs)		Stimulate the proliferation of specific pluripotent stem cells of the bone marrow in adults.
Granulocyte-CSF (G-CSF)		Specific for proliferative effects on cells of the granulocyte lineage; proliferative effects on both classes of lymphoid cells.
Macrophage-CSF (M-CSF)		Specific for cells of the macrophage lineage.
Granulocyte-MacrophageCSF (GM-CSF)		Proliferative effects on cells of both the macrophage and granulocyte lineages.

Other cytokines of interest that may be characterized by the invention described herein include adhesion molecules (R & D Systems, ADHESION MOLECULES I (1996), *available at* <http://www.rndsystems.com>); angiogenin (U.S. Patent No. 4,721,672; Moener et al., 226 EUR. J. BIOCHEM. 483 (1994)); annexin V (Cookson et al., 20 GENOMICS 463 (1994); Grundmann et al., 85 PROC. NATL. ACAD. SCI. USA 3708 (1988); U.S. Patent No. 5,767,247); caspases (U.S. Patent No. 6,214,858; Thornberry et al., 281 SCIENCE 1312 (1998)); chemokines (U.S. Patent Nos. 6,174,995; 6,143,289; Sallusto et al., 18 ANNU. REV. IMMUNOL. 593 (2000) Kunkel et al., 59 J. LEUKOCYTE BIOL. 81 (1996)); endothelin (U.S. Patent Nos. 6,242,485; 5,294,569; 5,231,166); eotaxin (U.S. Patent No. 6,271,347; Ponath et al., 97(3) J. CLIN. INVEST. 604-612 (1996)); Flt-3 (U.S. Patent No. 6,190,655); heregulins (U.S. Patent Nos. 6,284,535; 6,143,740; 6,136,558; 5,859,206; 5,840,525); Leptin (Leroy et al., 271(5) J. BIOL. CHEM. 2365 (1996); Maffei et al., 92 PNAS 6957 (1995); Zhang et al. (1994) NATURE 372: 425-432); Macrophage Stimulating Protein (MSP) (U.S. Patent Nos. 6,248,560; 6,030,949; 5,315,000); Neurotrophic Factors (U.S. Patent Nos. 6,005,081; 5,288,622); Pleiotrophin/Midkine (PTN/MK) (Pedraza et al., 117 J. BIOCHEM. 845 (1995); Tamura et al., 3 ENDOCRINE 21 (1995); U.S. Patent No. 5,210,026; Kadomatsu et al., 151 BIOCHEM. BIOPHYS. RES. COMMUN. 1312 (1988)); STAT proteins (U.S. Patent Nos. 6,030,808; 6,030,780; Darnell et al., 277 SCIENCE 1630-1635 (1997)); Tumor Necrosis Factor Family (Cosman, 7 BLOOD CELL (1996); Gruss et al., 85 BLOOD 3378 (1995); Beutler et al., 7 ANNU. REV. IMMUNOL. 625 (1989); Aggarwal et al., 260 J. BIOL. CHEM. 2345 (1985); Pennica et al., 312 NATURE 724 (1984)).

Also of interest regarding cytokines are proteins or chemical moieties that interact with cytokines, such as Matrix Metalloproteinases (MMPs) (U.S. Patent No. 6,307,089; NAGASE, MATRIX METALLOPROTEINASES IN ZINC METALLOPROTEASES IN HEALTH AND DISEASE (1996)), and Nitric Oxide Synthases (NOS) (Fukuto, 34 ADV. PHARM 1 (1995); U.S. Patent No. 5,268,465).

A further embodiment of the present invention applies the methodologies described herein to the characterization of the pharmacological effects of blood proteins. The term "blood protein" is a generic term for a vast group of proteins generally circulating in blood plasma, and important for regulating coagulation and clot dissolution. *See, e.g.,* Haematologic Technologies, Inc., HTI CATALOG, *available at* www.haemtech.com. Table 3 introduces, in a non-limiting fashion, some of the blood proteins contemplated by the present invention.

Table 3: Blood Proteins

Protein	Principle Activity	Reference
Factor V	In coagulation, this glycoprotein pro-cofactor, is converted to active cofactor, factor Va, via the serine protease α -thrombin, and less efficiently by its serine protease cofactor Xa. The prothrombinase complex rapidly converts zymogen prothrombin to the active serine protease, α -thrombin. Down regulation of prothrombinase complex occurs via inactivation of Va by activated protein C.	Mann et al., 57 ANN. REV. BIOCHEM. 915 (1988); <i>see also</i> Nesheim et al., 254 J. BIOL. CHEM. 508 (1979); Tracy et al., 60 BLOOD 59 (1982); Nesheim et al., 80 METHODS ENZYMOL. 249 (1981); Jenny et al., 84 PROC. NATL. ACAD. SCI. USA 4846 (1987).
Factor VII	Single chain glycoprotein zymogen in its native form. Proteolytic activation yields enzyme factor VIIa, which binds to integral membrane protein tissue factor, forming an enzyme complex that proteolytically converts factor X to Xa. Also known as extrinsic factor Xase complex. Conversion of VII to VIIa catalyzed by a number of proteases including thrombin, factors IXa, Xa, XIa, and XIIa. Rapid activation also occurs when VII combines with tissue factor in the presence of Ca, likely initiated by a small amount of pre-existing VIIa. Not readily inhibited by antithrombin III/heparin alone, but is inhibited when tissue factor added.	<i>See generally</i> , Broze et al., 80 METHODS ENZYMOL. 228 (1981); Bajaj et al., 256 J. BIOL. CHEM. 253 (1981); Williams et al., 264 J. BIOL. CHEM. 7536 (1989); Kiesel et al., 22 THROMBOSIS RES. 375 (1981); Seligsohn et al., 64 J. CLIN. INVEST. 1056 (1979); Lawson et al., 268 J. BIOL. CHEM. 767 (1993).
Factor IX	Zymogen factor IX, a single chain vitamin K-dependent glycoprotein, made in liver. Binds to negatively charged phospholipid surfaces. Activated by factor XIa or the factor VIIa/tissue factor/phospholipid complex. Cleavage at one site yields the intermediate IXa, subsequently converted to fully active form IXa β by cleavage at another site. Factor IXa β is the catalytic component of the "intrinsic factor Xase complex" (factor VIIIa/IXa/Ca ²⁺ /phospholipid) that proteolytically activates factor X to factor Xa.	Thompson, 67 BLOOD, 565 (1986); Hedner et al., HEMOSTASIS AND THROMBOSIS 39-47 (R.W. Colman, J. Hirsh, V.J. Marder, E.W. Salzman ed., 2 nd ed. J.P. Lippincott Co., Philadelphia) 1987; Fujikawa et al., 45 METHODS IN ENZYMOLOGY 74 (1974).
Factor X	Vitamin K-dependent protein zymogen, made in liver, circulates in plasma as a two chain molecule linked by a disulfide bond. Factor Xa (activated X) serves as the enzyme component of prothrombinase complex, responsible for rapid conversion of prothrombin to thrombin.	<i>See</i> Davie et al., 48 ADV. ENZYMOL 277 (1979); Jackson, 49 ANN. REV. BIOCHEM. 765 (1980); <i>see also</i> Fujikawa et al., 11 BIOCHEM. 4882 (1972); Discipio et al., 16 BIOCHEM. 698 (1977); Discipio et al., 18 BIOCHEM. 899 (1979); Jackson et al., 7 BIOCHEM. 4506 (1968); McMullen et

		al., 22 BIOCHEM. 2875 (1983).
Factor XI	Liver-made glycoprotein homodimer circulates, in a non-covalent complex with high molecular weight kininogen, as a zymogen, requiring proteolytic activation to acquire serine protease activity. Conversion of factor XI to factor XIa is catalyzed by factor XIIa. XIa unique among the serine proteases, since it contains two active sites per molecule. Works in the intrinsic coagulation pathway by catalyzing conversion of factor IX to factor IXa. Complex form, factor XIa/HMWK, activates factor XII to factor XIIa and prekallikrein to kallikrein. Major inhibitor of XIa is α_1 -antitrypsin and to lesser extent, antithrombin-III. Lack of factor XI procoagulant activity causes bleeding disorder: plasma thromboplastin antecedent deficiency.	Thompson et al., 60 J. CLIN. INVEST. 1376 (1977); Kurachi et al., 16 BIOCHEM. 5831 (1977); Bouma et al., 252 J. BIOL. CHEM. 6432 (1977); Wuepper, 31 FED. PROC. 624 (1972); Saito et al., 50 BLOOD 377 (1977); Fujikawa et al., 25 BIOCHEM. 2417 (1986); Kurachi et al., 19 BIOCHEM. 1330 (1980); Scott et al., 69 J. CLIN. INVEST. 844 (1982).
Factor XII (Hageman Factor)	Glycoprotein zymogen. Reciprocal activation of XII to active serine protease factor XIIa by kallikrein is central to start of intrinsic coagulation pathway. Surface bound α -XIIa activates factor XI to XIa. Secondary cleavage of α -XIIa by kallikrein yields β -XIIa, and catalyzes solution phase activation of kallikrein, factor VII and the classical complement cascade.	Schmaier et al., 18-38, and Davie, 242-267 HEMOSTASIS & THROMBOSIS (Colman et al., eds., J.B. Lippincott Co., Philadelphia, 1987).
Factor XIII	Zymogenic form of glutamyl-peptide γ -glutamyl transferase factor XIIIa (fibrinolytic, plasma transglutaminase, fibrin stabilizing factor). Made in the liver, found extracellularly in plasma and intracellularly in platelets, megakaryocytes, monocytes, placenta, uterus, liver and prostrate tissues. Circulates as a tetramer of 2 pairs of nonidentical subunits (A_2B_2). Full expression of activity is achieved only after the Ca^{2+} - and fibrin(ogen)-dependent dissociation of B subunit dimer from A_2 ' dimer. Last of the zymogens to become activated in the coagulation cascade, the only enzyme in this system that is not a serine protease. XIIIa stabilizes the fibrin clot by crosslinking the α and γ -chains of fibrin. Serves in cell proliferation in wound healing, tissue remodeling, atherosclerosis, and tumor growth.	See McDonaugh, 340-357 HEMOSTASIS & THROMBOSIS (Colman et al., eds., J.B. Lippincott Co., Philadelphia, 1987); Folk et al., 113 METHODS ENZYMOL. 364 (1985); Greenberg et al., 69 BLOOD 867 (1987). Other proteins known to be substrates for Factor XIIIa, that may be hemostatically important, include fibronectin (Iwanaga et al., 312 ANN. NY ACAD. SCI. 56 (1978)), a_2 -antiplasmin (Sakata et al., 65 J. CLIN. INVEST. 290 (1980)), collagen (Mosher et al., 64 J. CLIN. INVEST. 781 (1979)), factor V (Francis et al., 261 J. BIOL. CHEM. 9787 (1986)), von Willebrand Factor (Mosher et al., 64 J. CLIN. INVEST. 781 (1979)) and thrombospondin (Bale et al., 260 J. BIOL. CHEM. 7502 (1985); Bohn, 20 MOL. CELL BIOCHEM. 67 (1978)).

Fibrinogen	<p>Plasma fibrinogen, a large glycoprotein, disulfide linked dimer made of 3 pairs of non-identical chains (Aa, Bb and g), made in liver. Aa has N-terminal peptide (fibrinopeptide A (FPA), factor XIIIa crosslinking sites, and 2 phosphorylation sites. Bb has fibrinopeptide B (FPB), 1 of 3 N-linked carbohydrate moieties, and an N-terminal pyroglutamic acid. The g chain contains the other N-linked glycos. site, and factor XIIIa cross-linking sites. Two elongated subunits ((AaBbg)₂) align in an antiparallel way forming a trinodular arrangement of the 6 chains. Nodes formed by disulfide rings between the 3 parallel chains. Central node (n-disulfide knot, E domain) formed by N-termini of all 6 chains held together by 11 disulfide bonds, contains the 2 IIa-sensitive sites. Release of FPA by cleavage generates Fbn I, exposing a polymerization site on Aa chain. These sites bind to regions on the D domain of Fbn to form proto-fibrils. Subsequent IIa cleavage of FPB from the Bb chain exposes additional polymerization sites, promoting lateral growth of Fbn network. Each of the 2 domains between the central node and the C-terminal nodes (domains D and E) has parallel α-helical regions of the Aa, Bb and g chains having protease-(plasmin-) sensitive sites. Another major plasmin sensitive site is in hydrophilic preturbance of α-chain from C-terminal node. Controlled plasmin degradation converts Fbg into fragments D and E.</p>	<p>FURLAN, <i>Fibrinogen</i>, IN HUMAN PROTEIN DATA, (Haeberli, ed., VCH Publishers, N.Y., 1995); Doolittle, in HAEMOSTASIS & THROMBOSIS, 491-513 (3rd ed., Bloom et al., eds., Churchill Livingstone, 1994); HANTGAN, et al., in HAEMOSTASIS & THROMBOSIS 269-89 (2d ed., Forbes et al., eds., Churchill Livingstone, 1991).</p>
Fibronectin	<p>High molecular weight, adhesive, glycoprotein found in plasma and extracellular matrix in slightly different forms. Two peptide chains interconnected by 2 disulfide bonds, has 3 different types of repeating homologous sequence units. Mediates cell attachment by interacting with cell surface receptors and extracellular matrix components. Contains an Arg-Gly-Asp-Ser (RGDS) cell attachment-promoting sequence, recognized by specific cell receptors, such as those on platelets. Fibrin-fibronectin complexes stabilized by factor XIIIa-catalyzed covalent cross-linking of fibronectin to</p>	<p>Skorstengaard et al., 161 Eur. J. BIOCHEM. 441 (1986); Kornblihtt et al., 4 EMBO J. 1755 (1985); Odermatt et al., 82 PNAS 6571 (1985); Hynes, R.O., ANN. REV. CELL BIOL., 1, 67 (1985); Mosher 35 ANN. REV. MED. 561 (1984); Rouslahti et al., 44 Cell 517 (1986); Hynes 48 CELL 549 (1987); Mosher 250 BIOL. CHEM. 6614 (1975).</p>

	the fibrin a chain.	
β_2 -Glycoprotein I	Also called β_2 I and Apolipoprotein H. Highly glycosylated single chain protein made in liver. Five repeating mutually homologous domains consisting of approximately 60 amino acids disulfide bonded to form Short Consensus Repeats (SCR) or Sushi domains. Associated with lipoproteins, binds anionic surfaces like anionic vesicles, platelets, DNA, mitochondria, and heparin. Binding can inhibit contact activation pathway in blood coagulation. Binding to activated platelets inhibits platelet associated prothrombinase and adenylate cyclase activities. Complexes between β_2 I and cardiolipin have been implicated in the anti-phospholipid related immune disorders LAC and SLE.	<i>See, e.g.,</i> Lozier et al., 81 PNAS 2640-44 (1984); Kato & Enjyo 30 BIOCHEM. 11687-94 (1997); Wurm, 16 INT'L J. BIOCHEM. 511-15 (1984); Bendixen et al., 31 BIOCHEM. 3611-17 (1992); Steinkasserer et al., 277 BIOCHEM. J. 387-91 (1991); Nimpf et al., 884 BIOCHEM. BIOPHYS. ACTA 142-49 (1986); Kroll et al. 434 BIOCHEM. BIOPHYS. Acta 490-501 (1986); Polz et al., 11 INT'L J. BIOCHEM. 265-73 (1976); McNeil et al., 87 PNAS 4120-24 (1990); Galli et al., I LANCET 1544-47 (1990); Matsuuna et al., II LANCET 177-78 (1990); Pengo et al., 73 THROMBOSIS & HAEMOSTASIS 29-34 (1995).
Osteonectin	Acidic, noncollagenous glycoprotein (Mr=29,000) originally isolated from fetal and adult bovine bone matrix. May regulate bone metabolism by binding hydroxyapatite to collagen. Identical to human placental SPARC. An alpha granule component of human platelets secreted during activation. A small portion of secreted osteonectin expressed on the platelet cell surface in an activation-dependent manner	Villarreal et al., 28 BIOCHEM. 6483 (1989); Tracy et al., 29 INT'L J. BIOCHEM. 653 (1988); Romberg et al., 25 BIOCHEM. 1176 (1986); Sage & Bornstein 266 J. BIOL. CHEM. 14831 (1991); Kelm & Mann 4 J. BONE MIN. RES. 5245 (1989); Kelm et al., 80 BLOOD 3112 (1992).
Plasminogen	Single chain glycoprotein zymogen with 24 disulfide bridges, no free sulfhydryls, and 5 regions of internal sequence homology, "kringles", each five triple-looped, three disulfide bridged, and homologous to kringle domains in t-PA, u-PA and prothrombin. Interaction of plasminogen with fibrin and α_2 -antiplasmin is mediated by lysine binding sites. Conversion of plasminogen to plasmin occurs by variety of mechanisms, including urinary type and tissue type plasminogen activators, streptokinase, staphylokinase, kallikrein, factors IXa and XIIa, but all result in hydrolysis at Arg560-Val561, yielding two chains that remain covalently associated by a disulfide bond.	<i>See</i> Robbins, 45 METHODS IN ENZYMOLOGY 257 (1976); COLLEN, 243-258 BLOOD COAG. (Zwaal et al., eds., New York, Elsevier, 1986); <i>see also</i> Castellino et al., 80 METHODS IN ENZYMOLOGY 365 (1981); Wohl et al., 27 THROMB. RES. 523 (1982); Barlow et al., 23 BIOCHEM. 2384 (1984); SOTTRUP-JENSEN ET AL., 3 PROGRESS IN CHEM. FIBRINOLYSIS & THROMBOLYSIS 197-228 (Davidson et al., eds., Raven Press, New York 1975).
tissue Plasminogen Activator	t-PA, a serine endopeptidase synthesized by endothelial cells, is the major physiologic activator of plasminogen in clots, catalyzing conversion of	<i>See</i> Plasminogen.

	plasminogen to plasmin by hydrolising a specific arginine-alanine bond. Requires fibrin for this activity, unlike the kidney-produced version, urokinase-PA.	
Plasmin	<i>See</i> Plasminogen. Plasmin, a serine protease, cleaves fibrin, and activates and/or degrades compounds of coagulation, kinin generation, and complement systems. Inhibited by a number of plasma protease inhibitors <i>in vitro</i> . Regulation of plasmin <i>in vivo</i> occurs mainly through interaction with α_2 -antiplasmin, and to a lesser extent, α_2 -macroglobulin.	<i>See</i> Plasminogen.
Platelet Factor-4	Low molecular weight, heparin-binding protein secreted from agonist-activated platelets as a homotetramer in complex with a high molecular weight, proteoglycan, carrier protein. Lysine-rich, COOH-terminal region interacts with cell surface expressed heparin-like glycosaminoglycans on endothelial cells, PF-4 neutralizes anticoagulant activity of heparin exerts procoagulant effect, and stimulates release of histamine from basophils. Chemotactic activity toward neutrophils and monocytes. Binding sites on the platelet surface have been identified and may be important for platelet aggregation.	Rucinski et al., 53 BLOOD 47 (1979); Kaplan et al., 53 BLOOD 604 (1979); George 76 BLOOD 859 (1990); Busch et al., 19 THROMB. RES. 129 (1980); Rao et al., 61 BLOOD 1208 (1983); Brindley, et al., 72 J. CLIN. INVEST. 1218 (1983); Deuel et al., 74 PNAS 2256 (1981); Osterman et al., 107 BIOCHEM. BIOPHYS. RES. COMMUN. 130 (1982); Capitanio et al., 839 BIOCHEM. BIOPHYS. ACTA 161 (1985).
Protein C	Vitamin K-dependent zymogen, protein C, made in liver as a single chain polypeptide then converted to a disulfide linked heterodimer. Cleaving the heavy chain of human protein C converts the zymogen into the serine protease, activated protein C. Cleavage catalyzed by a complex of α -thrombin and thrombomodulin. Unlike other vitamin K dependent coagulation factors, activated protein C is an anticoagulant that catalyzes the proteolytic inactivation of factors Va and VIIIa, and contributes to the fibrinolytic response by complex formation with plasminogen activator inhibitors.	<i>See</i> Esmon, 10 PROGRESS IN THROMB. & HEMOSTS. 25 (1984); Stenflo, 10 SEMIN. IN THROMB. & HEMOSTAS. 109 (1984); Griffen et al., 60 BLOOD 261 (1982); Kisiel et al., 80 METHODS ENZYMOLOGY. 320 (1981); Discipio et al., 18 BIOCHEM. 899 (1979).
Protein S	Single chain vitamin K-dependent protein functions in coagulation and complement cascades. Does not possess the catalytic triad. Complexes to C4b binding protein (C4BP) and to negatively charged phospholipids, concentrating C4BP at cell surfaces	Walker, 10 SEMIN. THROMB. HEMOSTAS. 131 (1984); Dahlback et al., 10 SEMIN. THROMB. HEMOSTAS., 139 (1984); Walker 261 J. BIOL. CHEM. 10941 (1986).

	following injury. Unbound S serves as anticoagulant cofactor protein with activated Protein C. A single cleavage by thrombin abolishes protein S cofactor activity by removing gla domain.	
Protein Z	Vitamin K-dependent, single-chain protein made in the liver. Direct requirement for the binding of thrombin to endothelial phospholipids. Domain structure similar to that of other vitamin K-dependant zymogens like factors VII, IX, X, and protein C. N-terminal region contains carboxyglutamic acid domain enabling phospholipid membrane binding. C-terminal region lacks "typical" serine protease activation site. Cofactor for inhibition of coagulation factor Xa by serpin called protein Z-dependant protease inhibitor. Patients diagnosed with protein Z deficiency have abnormal bleeding diathesis during and after surgical events.	Sejima et al., 171 BIOCHEM. BIOPHYSICS RES. COMM. 661 (1990); Hogg et al., 266 J. BIOL. CHEM. 10953 (1991); Hogg et al., 17 BIOCHEM. BIOPHYSICS RES. COMM. 801 (1991); Han et al., 38 BIOCHEM. 11073 (1999); Kemkes-Matthes et al., 79 THROMB. RES. 49 (1995).
Prothrombin	Vitamin K-dependent, single-chain protein made in the liver. Binds to negatively charged phospholipid membranes. Contains two "kringle" structures. Mature protein circulates in plasma as a zymogen and, during coagulation, is proteolytically activated to the potent serine protease α -thrombin.	Mann et al., 45 METHODS IN ENZYMOLOGY 156 (1976); Magnusson et al., PROTEASES IN BIOLOGICAL CONTROL 123-149 (Reich et al., eds. Cold Spring Harbor Labs., New York 1975); Discipio et al., 18 BIOCHEM. 899 (1979).
α -Thrombin	See Prothrombin. During coagulation, thrombin cleaves fibrinogen to form fibrin, the terminal proteolytic step in coagulation, forming the fibrin clot. Thrombin also responsible for feedback activation of procofactors V and VIII. Activates factor XIII and platelets, functions as vasoconstrictor protein. Procoagulant activity arrested by heparin cofactor II or the antithrombin III/heparin complex, or complex formation with thrombomodulin. Formation of thrombin/thrombomodulin complex results in inability of thrombin to cleave fibrinogen and activate factors V and VIII, but increases the efficiency of thrombin for activation of the anticoagulant, protein C.	45 METHODS ENZYMOL. 156 (1976).
β -Thromboglobulin	Low molecular weight, heparin-binding, platelet-derived tetramer protein, consisting of four identical peptide chains. Lower affinity for heparin than PF-4. Chemotactic activity for human	See, e.g., George 76 BLOOD 859 (1990); Holt & Niewiarowski 632 BIOCHIM. BIOPHYS. ACTA 284 (1980); Niewiarowski et al., 55 BLOOD 453 (1980); Varma et al., 701 BIOCHIM.

	fibroblasts, other functions unknown.	BIOPHYS. ACTA 7 (1982); Senior et al., 96 J. CELL. BIOL. 382 (1983).
Thrombopoietin	Human TPO (Thrombopoietin, Mpl-ligand, MGDF) stimulates the proliferation and maturation of megakaryocytes and promotes increased circulating levels of platelets <i>in vivo</i> . Binds to c-Mpl receptor.	Horikawa et al., 90(10) BLOOD 4031-38 (1997); de Sauvage et al., 369 NATURE 533-58 (1995).
Thrombospondin	High-molecular weight, heparin-binding glycoprotein constituent of platelets, consisting of three, identical, disulfide-linked polypeptide chains. Binds to surface of resting and activated platelets, may effect platelet adherence and aggregation. An integral component of basement membrane in different tissues. Interacts with a variety of extracellular macromolecules including heparin, collagen, fibrinogen and fibronectin, plasminogen, plasminogen activator, and osteonectin. May modulate cell-matrix interactions.	Dawes et al., 29 THROMB. RES. 569 (1983); Switalska et al., 106 J. LAB. CLIN. MED. 690 (1985); Lawler et al., 260 J. BIOL. CHEM. 3762 (1985); Wolff et al., 261 J. BIOL. CHEM. 6840 (1986); Asch et al., 79 J. CLIN. CHEM. 1054 (1987); Jaffe et al., 295 NATURE 246 (1982); Wright et al., 33 J. HISTOCHEM. CYTOCHEM. 295 (1985); Dixit et al., 259 J. BIOL. CHEM. 10100 (1984); Mumby et al., 98 J. CELL. BIOL. 646 (1984); Lahav et al., 145 EUR. J. BIOCHEM. 151 (1984); Silverstein et al., 260 J. BIOL. CHEM. 10346 (1985); Clezardin et al. 175 EUR. J. BIOCHEM. 275 (1988); Sage & Bornstein (1991).
Von Willebrand Factor	Multimeric plasma glycoprotein made of identical subunits held together by disulfide bonds. During normal hemostasis, larger multimers of vWF cause platelet plug formation by forming a bridge between platelet glycoprotein IB and exposed collagen in the subendothelium. Also binds and transports factor VIII (antihemophilic factor) in plasma.	Hoyer 58 BLOOD 1 (1981); Ruggeri & Zimmerman 65 J. CLIN. INVEST. 1318 (1980); Hoyer & Shainoff 55 BLOOD 1056 (1980); Meyer et al., 95 J. LAB. CLIN. INVEST. 590 (1980); Santoro 21 THROMB. RES. 689 (1981); Santoro, & Cowan 2 COLLAGEN RELAT. RES. 31 (1982); Morton et al., 32 THROMB. RES. 545 (1983); Tuddenham et al., 52 BRIT. J. HAEMATOL. 259 (1982).

Additional blood proteins contemplated herein include the following human serum proteins, which may also be placed in another category of protein (such as hormone or antigen): Actin, Actinin, Amyloid Serum P, Apolipoprotein E, B2-Microglobulin, C-
5 Reactive Protein (CRP), Cholesterylester transfer protein (CETP), Complement C3B, Ceruplasmin, Creatine Kinase, Cystatin, Cytokeratin 8, Cytokeratin 14, Cytokeratin 18, Cytokeratin 19, Cytokeratin 20, Desmin, Desmocollin 3, FAS (CD95), Fatty Acid Binding Protein, Ferritin, Filamin, Glial Filament Acidic Protein, Glycogen Phosphorylase Isoenzyme BB (GPBB), Haptoglobulin, Human Myoglobin, Myelin Basic Protein, Neurofilament,
10 Placental Lactogen, Human SHBG, Human Thyroid Peroxidase, Receptor Associated Protein, Human Cardiac Troponin C, Human Cardiac Troponin I, Human Cardiac Troponin T, Human Skeletal Troponin I, Human Skeletal Troponin T, Vimentin, Vinculin, Transferrin

Receptor, Prealbumin, Albumin, Alpha-1-Acid Glycoprotein, Alpha-1-Antichymotrypsin, Alpha-1-Antitrypsin, Alpha-Fetoprotein, Alpha-1-Microglobulin, Beta-2-microglobulin, C-Reactive Protein, Haptoglobin, Myoglobin, Prealbumin, PSA, Prostatic Acid

Phosphatase, Retinol Binding Protein, Thyroglobulin, Thyroid Microsomal Antigen,

5 Thyroxine Binding Globulin, Transferrin, Troponin I, Troponin T, Prostatic Acid

Phosphatase, Retinol Binding Globulin (RBP). All of these proteins, and sources thereof, are known in the art. Many of these proteins are available commercially from, for example, Research Diagnostics, Inc. (Flanders, NJ).

Another embodiment applies the methodologies of the present invention to the
 10 analysis of the effects of a neurotransmitter or the receptor of a neurotransmitter on a patient or cell sample. Neurotransmitters are chemicals, some of them proteinaceous, made by neurons and used by them to transmit signals to the other neurons or non-neuronal cells (e.g., skeletal muscle, myocardium, pineal glandular cells) that they innervate. Neurotransmitters produce their effects by being released into synapses when their neuron of origin fires (i.e.,
 15 becomes depolarized) and then attaching to receptors in the membrane of the post-synaptic cells. This causes changes in the fluxes of particular ions across that membrane, making cells more likely to become depolarized, if the neurotransmitter happens to be excitatory, or less likely if it is inhibitory. Neurotransmitters can also produce their effects by modulating the production of other signal-transducing molecules ("second messengers") in the post-synaptic
 20 cells. *See generally* COOPER, BLOOM & ROTH, THE BIOCHEM. BASIS OF NEUROPHARMACOLOGY (7th Ed. Oxford Univ. Press, NYC, 1996); <http://web.indstate.edu/thcme/mwking/nerves>. Neurotransmitters contemplated in the present invention include, but are not limited to, Acetylcholine, Serotonin, γ -aminobutyrate (GABA), Glutamate, Aspartate, Glycine, Histamine, Epinephrine, Norepinephrine, Dopamine,
 25 Adenosine, ATP, Nitric oxide, and any of the peptide neurotransmitters such as those derived from pre-opiomelanocortin (POMC), as well as antagonists and agonists of any of the foregoing.

Table 4 presents a non-limiting list and description of some pharmacologically active peptides which may be incorporated into the methods contemplated by the present invention.

30 Table 4: Pharmacologically active peptides

Binding partner/ Protein of interest (form of peptide)	Pharmacological activity	Reference
EPO receptor	EPO mimetic	Wrighton et al., 273 SCIENCE 458-63

(intrapeptide disulfide-bonded)		(1996); U.S. Pat. No. 5,773,569, issued June 30, 1998.
EPO receptor (C-terminally cross-linked dimer)	EPO mimetic	Livnah et al., 273 SCIENCE 464-71 (1996); Wrighton et al., 15 NATURE BIOTECHNOLOGY 1261-5 (1997); Int'l Patent Application WO 96/40772, published Dec. 19, 1996.
EPO receptor (linear)	EPO mimetic	Naranda et al., 96 PNAS 7569-74 (1999).
c-Mpl (linear)	TPO-mimetic	Cwirla et al., 276 SCIENCE 1696-9 (1997); U.S. Pat. No. 5,869,451, issued Feb. 9, 1999; U.S. Pat. No. 5,932,946, issued Aug. 3, 1999.
c-Mpl (C-terminally cross-linked dimer)	TPO-mimetic	Cwirla et al., 276 SCIENCE 1696-9 (1997).
(disulfide-linked dimer)	stimulation of hematopoiesis ("G-CSF-mimetic")	Paukovits et al., 364 HOPPE-SEYLER'S Z. PHYSIOL. CHEM. 30311 (1984); Laerumgal., 16 EXP. HEMAT. 274-80 (1988).
(alkylene-linked dimer)	G-CSF-mimetic	Batnagar et al., 39 J. MED. CHEM. 38149 (1996); Cuthbertson et al., 40 J. MED. CHEM. 2876-82 (1997); King et al., 19 EXP. HEMATOL. 481 (1991); King et al., 86(Suppl. 1) BLOOD 309 (1995).
IL-1 receptor (linear)	inflammatory and autoimmune diseases ("IL-1 antagonist" or "IL-1 ra-mimetic")	U.S. Pat. No. 5,608,035; U.S. Pat. No. 5,786,331; U.S. Pat. No. 5,880,096; Yanofsky et al., 93 PNAS 7381-6 (1996); Akeson et al., 271 J. BIOL. CHEM. 30517-23 (1996); Wiekzorek et al., 49 POL. J. PHARMACOL. 107-17 (1997); Yanofsky, 93 PNAS 7381-7386 (1996).
Facteur thyrique (linear)	stimulation of lymphocytes (FTS-mimetic)	Inagaki-Ohara et al., 171 CELLULAR IMMUNOL. 30-40 (1996); Yoshida, 6 J. IMMUNOPHARMACOL 141-6 (1984).
CTLA4 MAb (intrapeptide di-sulfide bonded)	CTLA4-mimetic	Fukumoto et al., 16 NATURE BIOTECH. 267-70 (1998).
TNF- α receptor (exo-cyclic)	TNF- α antagonist	Takasaki et al., 15 NATURE BIOTECH. 1266-70 (1997); WO 98/53842, published December 3, 1998.
TNF- α receptor (linear)	TNF- α antagonist	Chirinos-Rojas, J. IMM., 5621-26.
C3b (intrapeptide di-sulfide bonded)	inhibition of complement activation; autoimmune diseases (C3b antagonist)	Sahu et al., 157 IMMUNOL. 884-91 (1996); Morikis et al., 7 PROTEIN SCI. 619-27 (1998).
vinculin (linear)	cell adhesion processes, cell growth, differentiation wound healing, tumor metastasis ("vinculin binding")	Adey et al., 324 BIOCHEM. J. 523-8 (1997).
C4 binding protein (C413P) (linear)	anti-thrombotic	Linse et al. 272 BIOL. CHEM. 14658-65 (1997).

urokinase receptor (linear)	processes associated with urokinase interaction with its receptor (e.g. angiogenesis, tumor cell invasion and metastasis; (URK antagonist)	Goodson et al., 91 PNAS 7129-33 (1994); International patent application WO 97/35969, published October 2, 1997.
Mdm2, Hdm2 (linear)	Inhibition of inactivation of p53 mediated by Mdm2 or hdm2; anti-tumor ("Mdm/hdm antagonist")	Picksley et al., 9 ONCOGENE 2523-9 (1994); Bottger et al. 269 J. MOL. BIOL. 744-56 (1997); Bottger et al., 13 ONCOGENE 13: 2141-7 (1996).
p21 ^{WAF1} (linear)	anti-tumor by mimicking the activity of p21 ^{WAF1}	Ball et al., 7 CURR. BIOL. 71-80 (1997).
farnesyl transferase (linear)	anti-cancer by preventing activation of ras oncogene	Gibbs et al., 77 CELL 175-178 (1994).
Ras effector domain (linear)	anti-cancer by inhibiting biological function of the ras oncogene	Moodie et al., 10 TRENDS GENET. 44-48 (1994); Rodriguez et al., 370 NATURE 527-532 (1994).
SH2/SH3 domains (linear)	anti-cancer by inhibiting tumor growth with activated tyrosine kinases	Pawson et al., 3 CURR. BIOL. 434-432 (1993); Yu et al., 76 CELL 933-945 (1994).
p16 ^{INK4} (linear)	anti-cancer by mimicking activity of p16; e.g., inhibiting cyclin D-Cdk complex ("p,16-mimetic")	Fahraeus et al., 6 CURR. BIOL. 84-91 (1996).
Src, Lyn (linear)	inhibition of Mast cell activation, IgE-related conditions, type I hypersensitivity ("Mast cell antagonist").	Stauffer et al., 36 BIOCHEM. 9388-94 (1997).
Mast cell protease (linear)	treatment of inflammatory disorders mediated by release of tryptase-6 ("Mast cell protease inhibitors")	International patent application WO 98/33812, published August 6, 1998.
SH3 domains (linear)	treatment of SH3-mediated disease states ("SH3 antagonist")	Rickles et al., 13 EMBO J. 5598-5604 (1994); Sparks et al., 269 J. BIOL. CHEM. 238536 (1994); Sparks et al., 93 PNAS 1540-44 (1996).
HBV core antigen (HBcAg) (linear)	treatment of HBV viral antigen (HBcAg) infections ("anti-HBV")	Dyson & Muray, PNAS 2194-98 (1995).
selectins (linear)	neutrophil adhesion inflammatory diseases ("selectin antagonist")	Martens et al., 270 J. BIOL. CHEM. 21129-36 (1995); European Pat. App. EP 0 714 912, published June 5, 1996.
calmodulin (linear, cyclized)	calmodulin antagonist	Pierce et al., 1 MOLEC. DIVEMILY 25965 (1995); Dedman et al., 267 J. BIOL. CHEM. 23025-30 (1993); Adey & Kay, 169 GENE 133-34 (1996).
integrins (linear, cyclized)	tumor-homing; treatment for conditions related to integrin-mediated cellular	International patent applications WO 95/14714, published June 1, 1995; WO 97/08203, published March 6, 1997; WO

	events, including platelet aggregation, thrombosis, wound healing, osteoporosis, tissue repair, angiogenesis (e.g., for treatment of cancer) and tumor invasion ("integrin-binding")	98/10795, published March 19, 1998; WO 99/24462, published May 20, 1999; Kraft et al., 274 J. BIOL. CHEM. 1979-85 (1999).
fibronectin and extracellular matrix components of T-cells and macrophages (cyclic, linear)	treatment of inflammatory and autoimmune conditions	International patent application WO 98/09985, published March 12, 1998.
somatostatin and cortistatin (linear)	treatment or prevention of hormone-producing tumors, acromegaly, gigantism, dementia, gastric ulcer, tumor growth, inhibition of hormone secretion, modulation of sleep or neural activity	European patent application EP 0 911 393, published Apr. 28, 1999.
bacterial lipopoly-saccharide (linear)	antibiotic; septic shock; disorders modulatable by CAP37	U.S. Pat. No. 5,877,151, issued March 2, 1999.
parclaxin, mellitin (linear or cyclic)	antipathogenic	International patent application WO 97/31019, published 28 August 1997.
VIP (linear, cyclic)	impotence, neuro-degenerative disorders	International patent application WO 97/40070, published October 30, 1997.
CTLs (linear)	cancer	European patent application EP 0 770 624, published May 2, 1997.
THF-gamma2 (linear)		Burnstein, 27 BIOCHEM. 4066-71 (1988).
Amylin (linear)		Cooper, 84 PNAS 8628-32 (1987).
Adreno-medullin (linear)		Kitamura, 192 BBRC 553-60 (1993).
VEGF (cyclic, linear)	anti-angiogenic; cancer, rheumatoid arthritis, diabetic retinopathy, psoriasis ("VEGF antagonist")	Fairbrother, 37 BIOCHEM. 17754-64 (1998).
MMP (cyclic)	inflammation and autoimmune disorders; tumor growth ("MMP inhibitor")	Koivunen, 17 NATURE BIOTECH. 768-74 (1999).
HGH fragment (linear)		U.S. Pat. No. 5,869,452, issued Feb. 9, 1999.
Echistatin	inhibition of platelet aggregation	Gan, 263 J. BIOL. 19827-32 (1988).
SLE autoantibody (linear)	SLE	International patent application WO 96/30057, published Oct. 3, 1996.
GD1 alpha	suppression of tumor metastasis	Ishikawa et al., 1 FEBS LETT. 20-4 (1998).
anti-phospholipid β -2 glycoprotein-1 (β 2GPI)	endothelial cell activation, anti-phospholipid syndrome (APS), thromboembolic	Blank Mal., 96 PNAS 5164-8 (1999).

antibodies	phenomena, thrombocytopenia, and recurrent fetal loss	
T-Cell Receptor β chain (linear)	diabetes	International patent application WO 96/101214, published Apr. 18, 1996.

IX. Database Creation, Database Access, And Business Methods

The business methods of the present application relate to the commercial and other uses of the methodologies of the present invention. In one aspect, the business methods include the marketing, sale, or licensing of the present methodologies in the context of providing consumers, *i.e.*, patients, medical practitioners, medical service providers, and pharmaceutical distributors and manufacturers, with the gene expression profiles, high information density gene expression profiles, and/or protein expression profiles provided by the present invention.

Furthermore, the present invention also relates to business methods in which gene expression profiles, high information density gene expression profiles, and/or protein expression profiles are used for analyzing test samples (*e.g.*, patient samples). In a specific embodiment, this method may be accomplished using the gene expression profile microarrays of the present invention. For example, a user (*e.g.*, a health practitioner such as a physician) may obtain a sample (*e.g.*, blood, tissue biopsy) from a patient. The sample may be prepared in-house, for example, using hospital facilities or the sample may be sent to a commercial laboratory facility. Briefly, RNA is extracted from the patient sample using methods that are well-known in the art. *See e.g.*, SAMBROOK ET AL. (1989). The RNA is, for example, then amplified by PCR, labeled with a fluorophore, and hybridized to a support representing a particular gene expression profile. The support is scanned for fluorescence and the results of the scan may be sent to a central gene expression profile database for analysis. In another embodiment, the sample itself is sent to a central laboratory facility for scanning analysis. The scanning results may be sent to the central laboratory facility for analysis via a computer terminal and through the Internet or other means. The connection between the user and the computer system is preferably secure.

In practice, the user may input, for example, information relating to the fluorescence scanning results of the support as well as additional information concerning the patient such as the patient's disease state, clinical chemistry (*e.g.*, red blood cell count, electrolytes), and other factors relating to the patient's disease state. The central computer system may then,

through the use of resident computer programs, provide an analysis of the patient's sample and generate a gene expression profile reflecting the patient's genetic profile.

Those skilled in the art will appreciate that the methods and apparatus of the present invention apply to any computer system, regardless of whether the computer system is a
5 complicated multi-user computing apparatus or a single user device such as a personal computer or workstation. A computer system suitably comprises a processor, main memory, a memory controller, an auxiliary storage interface, and a terminal interface, all of which are interconnected. Note that various modifications, additions, substitutions, or deletions may be made to the computer system within the scope of the present invention such as the addition of
10 cache memory or other peripheral devices.

The processor performs computation and control functions of the computer system, and comprises a suitable central processing unit (CPU). The processor may comprise a single integrated circuit, such as a microprocessor, or may comprise any suitable number of
integrated circuit devices and/or circuit boards working in cooperation to accomplish the
15 functions of a processor. The processor suitably executes the algorithms (*e.g.*, MaxCor, Mean Log Ratio) of the present invention within its main memory.

The main memory of the computer systems of the present invention suitably contains one or more computer programs relating to the algorithms used to generate the gene expression profiles and an operating system. The term "computer program" is used in its
20 broadest sense, and includes any and all forms of computer programs, including source code, intermediate code, machine code, and any other representation of a computer program. The term "memory," as used herein, refers to any storage location in the virtual memory space of the system. It should be understood that portions of the computer program and operating system may be loaded into an instruction cache for the main processor to execute, while other
25 files may well be stored on magnetic or optical disk storage devices. In addition, it is to be understood that the main memory may comprise disparate memory locations.

The computer systems of the present invention may also comprise a memory controller, through use of a separate processor, which is responsible for moving requested information from the main memory and/or through the auxiliary storage interface to the main
30 processor. While for the purposes of explanation, the memory controller is described as a separate entity, those skilled in the art understand that, in practice, portions of the function provided by the memory controller may actually reside in the circuitry associated with the main processor, main memory, and/or the auxiliary storage interface.

In a preferred embodiment, the auxiliary storage interface allows the computer system to store and retrieve information from auxiliary storage devices, such as magnetic disks (*e.g.*, hard disks or floppy diskettes) or optical storage devices (*e.g.*, CD-ROM). One suitable storage device is a direct access storage device (DASD). A DASD may be a floppy disk drive, which may read programs and data from a floppy disk. It is important to note that while the present invention has been (and will continue to be) described in the context of a fully functional computer system, those skilled in the art will appreciate that the mechanisms of the present invention are capable of being distributed as a program product in a variety of forms, and that the present invention applies equally regardless of the particular type of signal bearing media to actually carry out the distribution. Examples of signal bearing media include: recordable type media such as floppy disks and CD ROMS, and transmission type media such as digital and analog communication links, including wireless communication links.

Furthermore, the computer systems of the present invention may comprise a terminal interface that allows system administrators and computer programmers to communicate with the computer system, normally through programmable workstations. It should be understood that the present invention applies equally to computer systems having multiple processors and multiple system buses. Similarly, although the system bus of the preferred embodiment is a typical hardwired, multidrop bus, any connection means that supports bidirectional communication in a computer-related environment could be used.

The gene expression profile database, high information density gene expression profile database, and/or protein expression profiles may be an internal database designed to include annotation information about the expression profiles generated by the methods of the present invention and through other sources and methods. Such information may include, for example, the databases in which a given nucleic acid or protein amino acid sequence was found, patient information associated with the expression profile, including age, cancer or tumor type or progression, descriptive information about related cDNA associated with the sequence, tissue or cell source, sequence data obtained from external sources, treatment information, diagnostic and prognostic information, information regarding gene expression and/or protein expression in response to various stimuli, expression profiles for a given gene, high information density gene, and/or protein and the related disease state or course of disease, for example whether the expression profile relates to or signifies a cancerous or pre-cancerous state, and preparation methods. The expression profiles may be based on protein

and/or nucleic acid microarray data obtained from publicly available or proprietary sources. The database may be divided into two sections: one for storing the sequences and related expression profiles and the other for storing the associated information. This database may be maintained as a private database with a firewall within the central computer facility.

5 However, this invention is not so limited and the expression profile databases may be made available to the public.

The database may be a network system connecting the network server with clients. The network may be any one of a number of conventional network systems, including a local area network (LAN) or a wide area network (WAN), as is known in the art (*e.g.*, Ethernet).

10 The server may include software to access database information for processing user requests, and to provide an interface for serving information to client machines. The server may support the World Wide Web and maintain a website and Web browser for client use. Client/server environments, database servers, and networks are well documented in the technical, trade, and patent literature.

15 Through a Web browser, clients may construct search requests for retrieving data from a microarray database, a gene expression database, and/or protein expression database. For example, the user may “point and click” to user interface elements such as buttons, pull down menus, and scroll bars. The client requests may be transmitted to a Web application which formats them to produce a query that may be used to gather information from the
20 system database, based, for example, on microarray or expression data obtained by the client, and/or other phenotypic or genotypic information. For example, the client may submit expression data based on microarray expression profiles obtained from a patient and use the system of the present invention to obtain a diagnosis based on a comparison by the system of the client expression data with the expression data contained in the database. By way of
25 example, the system compares the expression profiles submitted by the client with expression profiles contained in the database and then provides the client with diagnostic information based on the best match of the client expression profiles with the database profiles. In addition, the website may provide hypertext links to public databases such as GenBank and associated databases maintained by the National Center for Biotechnology Information
30 (NCBI), part of the National Library of Medicine as well as any links providing relevant information for gene expression analysis, protein expression analysis, genetic disorders, scientific literature, and the like. Information including, but not limited to, identifiers, identifier types, biomolecular sequences, common cluster identifiers (GenBank, Unigene,

Incyte template identifiers, and so forth) and species names associated with each gene, is contemplated.

The present invention also provides a system for accessing bioinformation, including gene expression profiles, high information density gene expression profiles, protein
5 expression profiles, and annotative information, which is useful in the context of the methods of the present invention. The present invention contemplates, in one embodiment, the use of a Graphical User Interface ("GUI") for the access of gene expression profile information stored in a database. In a preferred embodiment, the GUI may be composed of two frames. A first frame may contain a selectable list of databases accessible by the user. When a
10 database is selected in the first frame, a second frame may display information resulting from the pair-wise comparison of the expression profile database with the client-supplied expression profile as described above, along with any other phenotypic or genotypic information.

The second frame of the GUI may contain a listing of biomolecular sequence
15 expression information and profiles contained in the selected database. Furthermore, the second frame may allow the user to select a subset, including all of the biomolecular sequences, and to perform an operation on the list of biomolecular sequences. In a preferred embodiment, the user may select the subset of biomolecular sequences by selecting a selection box associated with each biomolecular sequence. In a preferred embodiment, the
20 operations that may be performed include, but are not limited to, downloading all listed biomolecular sequences to a database spreadsheet with classification information, saving the selected subset of biomolecular sequences to a user file, downloading all listed biomolecular sequences to a database spreadsheet without classification information, and displaying classification information on a selected subset of biomolecular sequences.

25 If the user chooses to display classification information on a selected subset of biomolecular sequences, a second GUI may be presented to the user. In one embodiment, the second GUI may contain a listing of one or more external databases used to create the high information density gene expression profile databases as described above. Furthermore, for each external database, the GUI may display a list of one or more fields associated with each
30 external database. In another embodiment, the GUI may allow the user to select or deselect each of the one or more fields displayed in the second GUI. In yet another embodiment, the GUI may allow the user to select or deselect each of the one or more external databases.

In another embodiment, the business methods of the present invention include establishing a distribution system for distributing diagnostic of the present invention for sale, and may optionally include establishing a sales group for marketing the diagnostics. Yet another aspect of the present invention provides a method of conducting a target discovery
5 business comprising identifying, by one or more of the above drug discovery methods, a test compound, as described above, which modulates the level of expression of a gene, a high information density gene, the activity of the gene product, or the activity of the high information density gene product; and optionally conducting therapeutic profiling of compounds identified, or further analogs thereof, for efficacy and toxicity in animals; and
10 optionally licensing or selling, the rights for further drug development of said identified compounds.

Another embodiment of the present invention comprises a variety of business methods including methods for screening drug and toxicity effects on tissue or cell samples. A further aspect of the present invention comprises business methods for providing gene
15 expression profiles, high information density gene expression profiles, and/or protein expression profiles for normal and diseased tissues. Also within the scope of this invention are business methods providing diagnostics and predictors for patient samples.

A further aspect of the present invention comprises business methods for the manufacturing and use of gene microarrays, high information density gene microarrays, and
20 protein microarrays. The business methods further relate to providing information generated by using gene microarrays, gene expression profiles, high information density genes, high information density gene microarrays, high information density gene expression profiles, protein microarrays and protein expression microarrays.

The present invention also provides a business method for determining whether a
25 patient has a disease or disorder associated with the overexpression and/or upregulation of a gene, or a pre-disposition to such a disease or disorder. This method comprises the steps of receiving information related to a gene or protein (*e.g.*, sequence information and/or information related thereto), receiving phenotypic and/or genotypic information associated with the patient, and acquiring information from the databases of the present invention related
30 to the gene or protein and/or related to such a gene- or protein-associated disease or disorder, such as cancer and specifically colon cancer. Based on one or more of the phenotypic and/or genotypic information, the gene or protein information, and the acquired information, this method may further comprise the step of determining whether the subject has a disease or

disorder associated with a gene or protein, and specifically a gene or protein of the present invention, or a pre-disposition to such a gene-or protein-associated disease or disorder. The method may also comprise the step of recommending a particular treatment for the disease, disorder or pre-disease condition. Similarly, the present invention contemplates business
5 methods as described above using, for example, high information density genes or proteins.

In one embodiment, the present invention contemplates a business method for determining whether a patient has a cellular proliferation, growth, differentiation, and/or migration disorder or a pre-disposition to a cellular proliferation, growth, differentiation, and/or migration disorder and specifically a cancerous or pre-cancerous state. This method
10 comprises the steps of receiving information related to, *e.g.*, sequence information of a gene or protein of the present invention and/or information related thereto, receiving phenotypic information associated with the patient, acquiring information from the network related to, *e.g.*, sequence information of a gene or protein and/or information related thereto, and/or related to a cellular proliferation, growth, differentiation, and/or migration disorder and
15 specifically a cancerous or pre-cancerous state. Based on one or more of the phenotypic and/or genotypic information, the sequence information and/or information related thereto, and the acquired information this method may further comprise the step of determining whether the patient has a cellular proliferation, growth, differentiation, and/or migration disorder or a pre-disposition to a cellular proliferation, growth, differentiation, and/or
20 migration disorder and specifically a cancerous or pre-cancerous state. The method may also comprise the step of recommending a particular treatment for the disease, disorder or pre-disease condition. Similarly, the present invention contemplates business methods as described above using, for example, high information density genes or proteins.

Without further elaboration, it is believed that one skilled in the art, using the
25 preceding description, can utilize the present invention to the fullest extent. The following examples are illustrative only, and not limiting of the remainder of the disclosure in any way whatsoever.

EXAMPLES

30 Example 1: Cell-Specific Gene Expression Analysis

By integrating laser capture microdissection, RNA amplification, and cDNA microarray technology, diverse cell types obtained *in situ* may be successfully screened and subsequently identified by differential gene expression. To demonstrate this integration of

technologies, the differential gene expressions of large and small-sized neurons in the dorsal root ganglia (DRG) were examined. In general, large DRG are myelinated, fast-conducting neurons that transmit mechanosensory information, and small DRG neurons are unmyelinated, slow-conducting, and transmit nociceptive information.

5 As shown in Figure 1, large (diameter $>40\mu\text{m}$) and small (diameter $<25\mu\text{m}$) neurons were cleanly and individually captured via LCM from $10\mu\text{m}$ sections of Nissl-stained rat DRGs. For this study, two sets of 1000 large neurons and 3 sets of 1000 small neurons were captured for cDNA microarray analysis.

10 RNA was extracted from each set of neurons and linearly amplified an estimated 10^6 -fold via T7 RNA polymerase. Once amplified, three fluorescently labeled probes were synthesized from an individually amplified RNA (aRNA) and hybridized in triplicate to a microarray (or "chip") containing 477 cDNAs and 30 cDNAs encoding plant genes (for determination of non-specific nucleic acid hybridization). Expression in each neuronal set (designated as S1, S2, and S3 for small DRG neurons and L1 and L2 for large DRG neurons)
15 was monitored in triplicate, requiring a total of 15 microarrays. The quality of the microarray data is demonstrated in Figure 2a, which shows pseudocolor arrays, one resulting from hybridization to probes derived from neuronal set S1 and the other from neuronal set L2. The enlarged section of the chip displays some differences in fluorescence intensity (*i.e.*, expression levels) for particular cDNAs and demonstrates that regions containing different
20 cDNAs are relatively uniform in size and that the background between these regions is relatively low.

To determine whether a signal corresponding to a particular cDNA is reproducible between different chips, for each neuronal set, the coefficient of variation (CV) was calculated. From these values, the overall average CV for all 477 cDNAs per neuronal set
25 was calculated to be: S1 = 15.81%, S2 = 16.93%, S3 = 17.75%, L1 = 20.17 %, and L2 = 19.55%.

Independent amplifications ($\sim 10^6$ -fold) of different sets of the same neuronal subtype yielded quite similar expression patterns. For example, the correlation of signal intensities between S1 vs. S2 was $R^2 = 0.9688$, and between S1 vs. S3 was $R^2 = 0.9399$ (Figure 2b).
30 Similar results were obtained between the two sets of large neurons: $R^2 = 0.929$ for L1 vs. L2 (Figure 2b). Conversely, a comparison between all three small neuronal sets (S1, S2, and S3) versus the two large sets (L1 and L2) yielded a much lower correlation ($R^2 = 0.6789$),

demonstrating as expected that a subgroup of genes are differentially expressed in each of the two neuronal subtypes (Figure 2b).

To identify the mRNAs that are differentially expressed in large and small DRG neurons, the 477 cDNAs were examined and those with 1.5-fold or greater differences (at
5 P<0.05) were sequenced. Twenty-seven mRNAs appeared to be preferentially expressed in small DRG neurons and 14 mRNAs were preferentially expressed in large DRG (Figure 3 and Figure 4). To confirm the observed differential gene expression, *in situ* hybridization was performed with a subgroup of these cDNAs.

For the small neurons, five mRNAs were examined that encoded the following: fatty
10 acid binding protein, sodium voltage-gated channel (NaN), phospholipase C delta-4, CGRP, and annexin V. For the large DRG neurons, three mRNAs were examined: neurofilament NF-L, neurofilament NF-H, and the beta-1 subunit of voltage-gated sodium channels. Based on quantitative measurements comparing the overall intensity of signal in small and large neurons and the percentage of cells labeled within the total population of either small or large
15 neurons, the preferential expression of these mRNAs was demonstrated in large and small DRG neurons (Figure 5 and Figure 6).

Although this study identified preferentially expressed mRNAs within large and small DRG neurons, there is a great deal more heterogeneity within DRG neurons beyond simply small and large. For example, small DRG neurons are unmyelinated, slow-conducting, and
20 transmit nociceptive information; whereas large DRG are myelinated, fast-conducting neurons that transmit mechanosensory information. These structural and functional differences would presumably be reflected in a heterogeneous gene expression. To address this more complicated genetic heterogeneity, immunocytochemistry may be coupled with LCM followed by RNA amplification and cDNA chip analysis as a means to further
25 differentiate cell types within large and small DRG. In addition, chips containing a larger number of cDNAs (*i.e.*, >10,000) can be constructed to more accurately identify the differential gene expression between large and small neurons.

The results shown herein demonstrate that expression profiles generated via these methods may not only be useful for screening cDNAs, but also, more importantly, to produce
30 databases that contain cell type specific gene expression profile. Cell type specificity within a database will give an investigator much greater leverage in understanding the contributions of individual cell types to a particular normal or disease state and thus allow for a much finer hypotheses to be subsequently generated. Furthermore, genes, which are coordinately

expressed within a given cell type, can be identified as the database grows to contain numerous gene expression profiles from a variety of cell types (or neuronal subtypes). Coordinate gene expression may also suggest functional coupling between the encoded proteins and therefore aid in determining the function for the vast majority of cDNAs currently cloned.

Laser Capture Microdissection (LCM). Two adult female Sprague Dawley rats were used in this study. Animals were anesthetized with Metofane (Methoxyflurane, Cat# 556850, Mallinckrodt Veterinary Inc. Mundelein, IL) and sacrificed by decapitation. Using RNase-free conditions, cervical dorsal root ganglia (DRGs) were quickly dissected, placed in cryomolds, covered with frozen-tissue embedding medium OCT (Tissue-Tek, GBI, Inc., Clearwater, MN), and frozen in dry ice-cold 2-methylbutane (~ -60°C). The DRGs were then sectioned at 7-10 µm in a cryostat, mounted on plain (non-coated) clean microscope slides, and immediately frozen on a block of dry ice. The sections were stored at -70°C until further use.

A quick Nissl (cresyl violet acetate) staining was employed in order to identify the DRG neurons. Slides containing DRG sections were loaded onto a slide holder, immediately fixed in 100% ethanol for 1 minute followed by rehydration via subsequent immersions (5 seconds each) in 95%, 70%, and 50% ethanol diluted in RNase-free deionized water. Next, the slides were stained with 0.5% Nissl/0.1 M sodium acetate buffer for 1 minute, dehydrated in graded ethanol (5 seconds each), and cleared in xylene (1 minute). Once air-dried, the slides were ready for LCM.

The PixCell II LCMTM System from Acturus Engineering Inc. (Mountain View, CA) was used for laser-capture. Following manufacture's protocols, 2 sets of large and 3 sets small DRG neurons (1000 cells per set) were laser-captured. The criteria for large and small DRG neurons are as follows: a DRG neuron was classified as small if it had a diameter <25 µm plus an identifiable nucleus whereas a DRG neuron with a diameter >40 µm plus an identifiable nucleus was classified as large.

RNA extraction of LCM samples. Total RNA was extracted from the LCM samples with Micro RNA Isolation Kit (Stratagene, San Diego, CA) with some modifications.

Briefly, after incubating the LCM samples in 200 µl denaturing buffer and 1.6 µl β-Mercaptoethanol at room temperature for 5 minutes, the LCM samples were extracted with 20 µl of 2 M sodium acetate, 220 µl phenol, and 40 µl chloroform:isoamyl alcohol. The

aqueous layer was collected, mixed with 1 µl of 10 mg/ml carrier glycogen, and then precipitated with 200 µl of isopropanol. Following a 70% ethanol wash and air-dry, the pellets were resuspended in 16 µl of RNase-free water, 2 µl 10x DNase I reaction buffer, 1 µl RNasin, and 1 µl of DNase I, then incubated at 37°C for 30 minutes to remove any genomic DNA contamination. The phenol-chloroform extraction was repeated. The pellet was resuspend in 11 µl of RNase-free water and used for RT-PCR and RNA amplification.

Reverse transcription (RT) of RNA. First stand synthesis was completed by adding 10 µl of RNA isolated from the LCM samples and 1 µl of 0.5 mg/ml T7-oligo dT primer (5'TCTAGTCGACGGCCAGTGAATTGTAATACGACTCACTATAGGGCGT₂₁-3'). The primer/RNA mix was incubated for 10 minutes at 70°C, followed by a 5-minute incubation at 42°C. Next, 4 µl 5x first strand reaction buffer, 2 µl 0.1 M DTT, 1 µl 10 mM dNTPs, 1 µl RNasin, and 1 µl Superscript II (Invitrogen, Carlsbad, CA) were added to the mix and incubated at 42°C for one hour. Following this incubation, 30 µl second strand synthesis buffer, 3 µl 10 mM dNTPs, 4 µl DNA Polymerase I, 1 µl *E. coli* RNase H, 1 µl *E. coli* DNA ligase, and 92 µl RNase-free water were added and samples were incubated at 16°C for 2 hours. T4 DNA Polymerase (2 µl) was then added to each sample and samples were incubated for 10 minutes at 16°C. The cDNA was then extracted by the phenol-chloroform method and washed 3x with 500 µl water in a Microcon-100 column (Millipore Corp., Bedford, MA). After collection from the column, the cDNA was dried to a final volume of 8 µl for *in vitro* transcription.

RNA amplification. The *Ampliscribe* T7 Transcription Kit (Epicentre Technologies) was used to amplify RNA. In a microfuge tube, 8 µl double-stranded cDNA; 2 µl of 10x *Ampliscribe* T7 buffer; 1.5 µl of each 100 mM ATP, CTP, GTP, and UTP; 2 µl 0.1 M DTT; and 2 µl T7 RNA Polymerase was added and then incubated at 42°C for 3 hours. The amplified RNA (aRNA) was washed 3x in a Microcon-100 column, collected, and dried to a final volume of 10 µl.

Amplified RNA (10 µl) from the first round amplification was mixed with 1 µl random hexamers (1 mg/ml, Pharmacia Corp., Piscataway, NJ), incubated for 10 minutes at 70°C, chilled on ice, and then equilibrated at room temperature for 10 minutes. For the initial reaction, 4 µl 5x first stand buffer, 2 µl 0.1 M DTT, 1 µl 10mM dNTPs, 1 µl RNasin, and 1 µl Superscript RT II were added to the aRNA mix, and then incubated at room temperature

for 5 minutes followed by a 1-hour incubation at 37°C. Following the 1-hour incubation, 1 µl RNase H was added and the sample was incubated at 37°C for 20 minutes. For second strand cDNA synthesis, 1 µl T7-oligo dT primer (0.5 mg/ml) was added to the aRNA reaction mix and the sample was incubated at 70°C for 5 minutes, then for 10 minutes at 42°C.

5 Following this incubation, 30 µl second strand synthesis buffer, 3 µl 10 mM dNTPs, 4 µl DNA Polymerase I, 1 µl *E. coli* RNase H, 1 µl *E. coli* DNA ligase, and 90 µl of RNase-free water were added to the sample mix and the sample was then incubated at 37°C for 2 hours. T4 DNA Polymerase (2 µl) was then added and the sample was incubated for 10 minutes at 16°C. The double-stranded cDNA was extracted with 150 µl phenol/chloroform to remove
10 extraneous protein and purified with Microcon-100 column to remove the unincorporated nucleotides and salts. The cDNA can be used for T7 *in vitro* transcription and aRNA amplification.

In situ Hybridization. Briefly, cDNAs were subcloned into pBluescript II SK (Stratagene). The cDNA vectors were then linearized and radiolabeled by ³⁵S-UTP
15 incorporation via *in vitro* transcription with T7 or T3 RNA polymerase. The probes were then purified with Quick Spin™ Columns (Boehringer Mannheim, Indianapolis, IN). The radiolabeled probes (10⁷ cpm/probe) were hybridized to rat DRG sections (10 µm, 4% paraformaldehyde-fixed) which were mounted on Superfrost Plus slides (VWR). Following an overnight hybridization at 58°C, the slides were exposed to film. Subsequently, the slides
20 were coated with Kodak liquid emulsion NTB2 and exposed in light-proof boxes for 1-2 weeks at 4°C. The slides were developed in Kodak Developer D-19, fixed in Kodak Fixer, and Nissl stained for expression analysis.

Under light field microscopy, mRNA expression levels of specific cDNAs were semi-quantitatively analyzed. This was accomplished as follows: no expression (-, grains were <5-
25 fold of the background); weak expression (±, grains were 5- to 10-fold of the background); low expression (+, grains were 10- to 20-fold of the background); moderated expression (++ , grains were 20- to 30-fold of the background); and strong expression (+++ , grains were >30-fold of the background) (Figure 6). The percentage of small or large neurons expressing a specific mRNA was obtained by counting the number of labeled (above background) and
30 unlabeled cells from four sections (at least 200 cells were counted).

Microarray design. The 477 cDNA clones, obtained from two separate differential display experiments, were printed on silylated slides. The print spots were about 125 µm in

diameter and were spaced 300 μm apart from center to center. Plant genes were also printed on the slides to serve as a control for non-specific hybridization.

Microarray probe synthesis. Cy3-labeled cDNA probes were synthesized from aRNA isolated from LCM DRGs with Superscript Choice System for cDNA Synthesis (Invitrogen Corp., Carlsbad, CA). In brief, 5 μg aRNA and 3 μg random hexamers were mixed in a total volume of 26 μl (containing RNase-free water), heated to 70°C for 10 minutes, and then chilled on ice. For the labeling reaction, 10 μl first strand buffer, 5 μl 0.1 M DTT, 1.5 μl Rnasin, 1 μl 25 mM d(GAT)TP, 2 μl 1mM dCTP, 2 μl Cy3-dCTP, and 2.5 μl Superscript RT II were added to the aRNA mix and incubated at room temperature for 10 minutes, and then for 2 hours at 37°C. To degrade the aRNA template, 6 μl 3N NaOH was added and the sample was incubated at 65°C for 30 minutes. Following this incubation, 20 μl 1M Tris-HCl (pH 7.4), 12 μl 1N HCl, and 12 μl water were added. The probes were purified with Microcon 30 Columns (Millipore Corp., Bedford, MA) and Qiagen Nucleotide Removal Columns (Qiagen Corp., Valencia, CA). The probes were vacuum-dried and resuspended in 20 μl of hybridization buffer (5x SSC, 0.2% SDS) containing mouse Cot1 DNA.

Microarray hybridization. Printed glass slides were treated with sodium borohydride solution (0.066 M NaBH₄, 0.06 M NaCl) to ensure amino-linkage of cDNAs to the slides. Then, the slides were boiled in water for 2 minutes to denature the cDNA. Cy3-labeled probes were heated to 99°C for 5 minutes, cooled to room temperature for 5 minutes, and then applied to the slides. The slides were covered with glass cover slips, sealed with DPX (Fluka) and hybridized at 60°C for 4-6 hours. At the end of hybridization, the slides were cooled to room temperature. The slides were first washed in 1x SSC and 0.2% SDS at 55°C for 5 minutes, and then washed in 0.1x SSC and 0.2% SDS for 5 minutes at 55°C. After a quick rinse in 0.1x SSC and 0.2% SDS, the slides were air dried and ready for scanning.

Microarray quantitation. The cDNA microarrays were scanned for Cy3 fluorescence using the ScanArray 3000 (General Scanning, Inc., Watertown, MA). ImGene Software (Biodiscovery, Inc., Marina Del Ray, CA) was then subsequently used for quantitation. Briefly, the intensity of each spot (*i.e.*, cDNA) was corrected by subtracting the immediate surrounding background. Next, the corrected intensities were normalized for each cDNA with the following formula:

$$\frac{\text{intensity (background corrected)}}{75^{\text{th}}\text{-percentile value of the intensity of the entire chip}} \times 1000$$

To determine “non-specific” nucleic acid hybridization, 75th-percentile values were calculated from the individual averages of each plant cDNA (for a total of 30 different cDNAs). The overall 75-percentile value for S1, S2, and S3 was 48.68, and for L1 and L2 was 40.94.

Statistical analyses. To assess the correlation of intensity value for each cDNA between individual sets of neurons (*i.e.*, S1 vs. S2) or between two neuronal subtypes (*i.e.*, small DRG vs. large DRG), scatter plots were used and the linear relationships were measured. The coefficient of determination (R^2) was calculated and indicated the variability of intensity values in one group vs. the other.

To statistically determine whether the intensity values measured from microarray quantitation were true signals, each intensity was compared, via a one-sample *t*-test, to the 75th-percentile value of the 30 plant cDNAs that were present on each chip (representing non-specific nucleic acid hybridization). Values not significantly different from the 75-percentile value are presented in Figure 3 and Figure 4 and so noted. To determine which cDNAs are statistically significant in their differential gene expression between large and small neurons, the intensity for each cDNA from neuronal sets for large neurons (L1 and L2) and small neurons (S1, S2, and S3) were grouped together and intensity values were averaged for each corresponding cDNA. A two-sample *t*-test for one-tailed hypotheses was used to detect a gene expression difference between small neurons and large neurons.

Example 2: Algorithms To Produce Gene Or Protein Expression Profiles

Each cell or tumor type in any given state or age has a unique gene expression pattern that distinguishes it from other tissues or cells. Using profile extraction algorithms, the gene expression profiles from many different cell types may be extracted to create a profile database. Thus, in the broadest sense, unknown samples can then be identified by comparing its profile against such a database.

To create such a database, tissue or cell samples may be divided into classifying groups (*i.e.*, tumor vs. normal; endothelial vs. muscle, etc.). This can be done either manually or if the groups are unknown, by using a clustering algorithm such as k-means. The gene expression data is transformed into a log-ratio value, and the genes with weak

differential values are filtered from the data. The gene expression profiles are then extracted using the MaxCor or Mean Log Ratio algorithms of the present invention.

For an unknown sample, it may be necessary to transform the gene expression data of the sample prior to scoring against the expression profiles. The type of data transformation may depend on the profile extraction algorithm used (*i.e.*, MaxCor or Mean Log Ratio). The sample expression data is then scored against the profile database. A high score indicates that the unknown sample contains or is related to the sample from which the profile was derived. However, the most accurate scoring function will depend on the profile extraction algorithm used to extract the gene expression data.

Preparation of data for profile extraction. First, a reference gene expression vector is constructed where A, B, ... Z denote the groups of samples (*e.g.*, tumor tissue or smooth muscle cell) that will be differentiated and *a, b, ... z* denote the number of samples within each group, respectively. As an example, the notation A_{21} represents the expression intensity from the 2nd gene in sample 1 of group A. If each sample was hybridized to a DNA chip with size n genes, then the following matrices represent expression data from all of the groups A, B, ... Z, respectively.

$$\begin{bmatrix} A_{11} & A_{12} & \cdots & A_{1a} \\ A_{21} & A_{22} & \cdots & A_{2a} \\ \vdots & \cdots & \ddots & \vdots \\ A_{n1} & A_{n2} & \cdots & A_{na} \end{bmatrix} \begin{bmatrix} B_{11} & B_{12} & \cdots & B_{1b} \\ B_{21} & B_{22} & \cdots & B_{2b} \\ \vdots & \cdots & \ddots & \vdots \\ B_{n1} & B_{n2} & \cdots & B_{nb} \end{bmatrix} \cdots \begin{bmatrix} Z_{11} & Z_{12} & \cdots & Z_{1z} \\ Z_{21} & Z_{22} & \cdots & Z_{2z} \\ \vdots & \cdots & \ddots & \vdots \\ Z_{n1} & Z_{n2} & \cdots & Z_{nz} \end{bmatrix}$$

The geometric mean expression value is calculated for each gene in each matrix. Thus, $A_{1(\text{geomean})}$ is the geometric mean of set $(A_{11} A_{12} \dots A_{1a})$ where A_1 denotes gene 1 in group A.

$$\begin{bmatrix} A_{1(\text{geomean})} \\ A_{2(\text{geomean})} \\ \vdots \\ A_{n(\text{geomean})} \end{bmatrix} \begin{bmatrix} B_{1(\text{geomean})} \\ B_{2(\text{geomean})} \\ \vdots \\ B_{n(\text{geomean})} \end{bmatrix} \cdots \begin{bmatrix} Z_{1(\text{geomean})} \\ Z_{2(\text{geomean})} \\ \vdots \\ Z_{n(\text{geomean})} \end{bmatrix}$$

The reference gene expression vector is simply the geometric mean of those vectors:

$$\begin{bmatrix} \bar{X}_1 \\ \bar{X}_2 \\ \vdots \\ \bar{X}_n \end{bmatrix} \text{ where } \bar{X}_1 \text{ is the geometric mean of } \{A_{1(\text{geomean})} \ B_{1(\text{geomean})} \ \cdots \ Z_{1(\text{geomean})}\}$$

5 The original data set is then transformed by taking the log of the ratio relative to the reference gene expression value for each gene creating the matrices $\{A' \ B' \ \dots \ Z'\}$ where $A'_{11} = \ln(A_{11} / \bar{X}_1)$ and $Z'_{nz} = \ln(Z_{nz} / \bar{X}_n)$. The values now represent the fold increase or decrease over the average for each gene.

$$10 \quad \begin{bmatrix} A'_{11} & A'_{12} & \cdots & A'_{1a} \\ A'_{21} & A'_{22} & \cdots & A'_{2a} \\ \vdots & \cdots & \ddots & \vdots \\ A'_{n1} & A'_{n2} & \cdots & A'_{na} \end{bmatrix} \begin{bmatrix} B'_{11} & B'_{12} & \cdots & B'_{1b} \\ B'_{21} & B'_{22} & \cdots & B'_{2b} \\ \vdots & \cdots & \ddots & \vdots \\ B'_{n1} & B'_{n2} & \cdots & B'_{nb} \end{bmatrix} \cdots \begin{bmatrix} Z'_{11} & Z'_{12} & \cdots & Z'_{1z} \\ Z'_{21} & Z'_{22} & \cdots & Z'_{2z} \\ \vdots & \cdots & \ddots & \vdots \\ Z'_{n1} & Z'_{n2} & \cdots & Z'_{nz} \end{bmatrix}$$

The genes with a weak differentiation power are removed from the matrix. The Kruskal-Wallis rank test was used to rank the genes with the highest differentiation power for separating the groups, A, B, ... Z. A low p-value from the rank test indicates a high
15 differentiation power. A p-value of 0.0025 was used as the cut-off value.

Finally, for each resulting matrix $\{A'' \ B'' \ \dots \ Z''\}$, apply a profile extraction algorithm to create a profile representing each group.

Profile extraction using the MaxCor algorithm. The MaxCor algorithm is applied to
20 each group $\{A'' \ B'' \ \dots \ Z''\}$ separately. For each pair of columns in the matrix, the genes coordinately expressed in high, average, or low levels over the mean (defined below) are given a value (1, 0, or -1, respectively), producing a weight vector representing the pair. Thus, for matrix A'' , $\left(\frac{a(a-1)}{2}\right)$, pairwise calculations are performed to produce a weight vector representing the matrix pair. A final average weight vector which will be the profile
25 for group A, is computed by averaging each weight vector calculated for matrix A'' . The

profile contains the same number of genes as A'' and its values should be within [-1 to 1]. These values, -1 and 1, represent the genes consistently expressed in low or high levels, respectively, relative to the mean of all groups. The MaxCor algorithm is applied to each group individually to produce a profile for each group.

- 5 **Value assignment for coordinately expressed genes.** For a pair of columns ($c1$ and $c2$), the values are normalized to create $c1'$ and $c2'$. Thus, $c1_i$ becomes $\left(\frac{c1_i - \bar{c1}}{S_{c1}} \right)$ where $\bar{c1}$ is the mean of column $c1$ and S_{c1} is the standard deviation. For each gene pair in $c1'$ and $c2'$, the normalized values are stored as vector $p12$ and then the $p12$ values are sorted from lowest to highest. A cutoff value is established, such as 0.5, and all genes with a greater normalized
- 10 value than the cutoff value are collected in $p12$. The Pearson correlation coefficient is calculated for this set of genes using the values in column $c1$ and $c2$. The cutoff value is then continually increased until the correlation coefficient is greater than a set value, such as 0.8. When this is complete, the set of genes meeting this criteria is assigned a value of 1 if both gene values in $c1'$ and $c2'$ are positive and -1 if both gene values are negative. For all other
- 15 genes in $c1'$ and $c2'$, a zero value is assigned. The resulting vector is a weight vector which represents the pair.

- Sample scoring using the MaxCor algorithm.** Before scoring a new sample, the genes in the sample S with weak differentiation values are removed so that the rows remaining are the same as those in the profile vectors, thus creating sample vector S'' . The
- 20 score is the sum of the normalized values for each gene in S'' and its weight in the profile vector. For example, the score between sample vector S'' and profile vector A^s is $\sum_{i=1-n} S''_i A_i^s$.
- The normalized score is (score - mean of randomized score)/(standard deviation of randomized score), where the randomized score is the score between S'' and the profile vector which has its gene positions randomized. Typically, 100 randomized scores are generated to
- 25 calculate the mean and the standard deviation.

Profile extraction using the Mean Log Ratio approach. This algorithm is also applied to each group or matrix $\{A'' B'' \dots Z''\}$ individually. For each matrix, the profile vector is the row mean of the matrix. Thus, the profile vectors for groups $\{A'' B'' \dots Z''\}$ are:

$$\begin{bmatrix} \bar{A}_1'' \\ \bar{A}_2'' \\ \vdots \\ \bar{A}_n'' \end{bmatrix} \begin{bmatrix} \bar{B}_1'' \\ \bar{B}_2'' \\ \vdots \\ \bar{B}_n'' \end{bmatrix} \dots \begin{bmatrix} \bar{Z}_1'' \\ \bar{Z}_2'' \\ \vdots \\ \bar{Z}_n'' \end{bmatrix} \text{ where } \bar{A}_1'' \text{ is the mean of } \{A_{11}'', A_{12}'', \dots, A_{1a}''\}.$$

Sample scoring using the Mean Log Ratio expression profiles. Prior to scoring a new sample, the gene expression vector of the sample is transformed by taking the log ratio relative to the reference gene expression vector for each gene. For example, the transformation of the sample S is:

$$S = \begin{bmatrix} S_1 \\ S_2 \\ \vdots \\ S_n \end{bmatrix} \text{ which leads to } S' = \begin{bmatrix} S'_1 \\ S'_2 \\ \vdots \\ S'_n \end{bmatrix}, \text{ where } S'_1 = \ln(S_1 / \bar{X}_1).$$

The genes with weak differentiation values are removed so the rows remaining are the same as those in the profile vectors, thus creating sample vector S'' . The score against each profile is then calculated by taking the Euclidean distance between S'' and the profile vector. The normalized score is (score – mean of randomized score)/(standard deviation of randomized score), where the randomized score is the Euclidean distance between S'' and the profile vector which has randomized gene positions. Typically, 100 randomized scores are generated to calculate the mean and the standard deviation.

Example 3: Gene Expression Profiles For Human Primary Cells

Gene expression profiles were collected from a set of human primary cells via DNA microarray technology. These gene expression profiles can then be used to classify unknown cell or tissue samples.

Thirty human primary cell samples were purchased from Clonetics Corporation (San Diego, CA). These primary cells were classified into the following categories: endothelial, epithelial, and muscle and also categorized based on the origin of tissue (Figure 7). Total RNA was extracted, amplified, and labeled with Cy5-dCTP as described in Example 1. The resultant labeled cDNAs were hybridized to microarray chips, which contain 7286 DNA

molecules representing 3643 unique genes each spotted twice. Each labeled cDNA probe was separated into two aliquots and each aliquot was hybridized to an identical microarray chip. Following a wash, the cDNA chips were scanned and the intensity of the spots was recorded and converted into a numerical value. To normalize the data, the spot intensities of each chip were divided by the intensity value of the 75th percentile of the chip, then these values were multiplied by 100. For each primary cell, a final gene intensity vector is produced by averaging four intensity values for each gene (2 spots per chip times 2 chips). The controls, low quality samples, and missing data values were removed, and 3940 genes were used for the final analysis.

Clustering analysis of the gene expression vectors of the primary cell samples confirmed that these samples could be classified into three groups: endothelial, epithelial, and muscle cell (Figure 8). A reference vector was generated, and the intensities were converted into a log ratio. A gene was filtered from the matrix if the p-value from the Kruskal-Wallis rank test was greater than 0.0025.

The resultant transformed matrix, composed of 459 genes from the 30 primary cell types, was then used for profile extraction using the Mean Log Ratio algorithm as described (Figure 9). Four expression profiles were generated, primary, endothelial, epithelial, and muscle (Figures 9, 10, 11, and 12). The primary profile represents 186 genes that may be used to classify primary cells. The endothelial profile represents 55 genes that may be used to classify endothelial cells. The epithelial profile represents 52 genes that may be used to classify epithelial cells. Finally, the muscle profile represents 40 genes that may be used to classify muscle cells. The sequence source (Seq. Source) is the gene database (GB: GenBank; and INCYTE: Incyte Genomes) that the sequence was selected from and the Seq ID is the accession number of the particular gene sequence. The endothelial, epithelial, and muscle profile values are the numeric representation of the specific profile. The p-value is based on the Kruskal-Wallis rank test in which smaller p-values represents clones with higher discriminate power for classifying samples. The source description identifies the particular gene.

These expression profiles are also shown graphically by assigning colors to the numeric values obtained (Figure 13). The expression profiles were then used to classify the 30 primary cells by taking each transformed primary cell gene expression vector and scoring it against the three expression profiles separately using the Mean Log Ratio scoring algorithm. The results demonstrated that the endothelial, epithelial, and muscle cell types

scored high against their own expression profiles but low against the other two expression profiles (Figure 14).

In additional experiments, a different primary cell sample was removed from the profile generation step and then scored against the resultant profile. The results from this analysis were similar to that in Figure 5 indicating that the expression profiles can be used to score against independent samples (Figure 15).

The analysis was repeated using the MaxCor algorithm as described. The self-validation results are shown in Figure 16 and the omit one analysis result in Figure 17. The results are essentially the same as that from the Mean Log Ratio analysis.

Figure 9 shows a gene expression profile for primary cells. Specifically, a primary cell gene expression profile may comprise one or more of the following nucleic acid sequences: SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 38; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43; SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO: 59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID NO: 63; SEQ ID NO: 64; SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 79; SEQ ID NO: 80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID NO: 83; SEQ ID NO: 84; SEQ ID NO: 85; SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO: 88; SEQ ID NO: 89; SEQ ID NO: 90; SEQ ID NO: 91; SEQ ID NO: 92; SEQ ID NO: 93; SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID NO: 96; SEQ ID NO: 97; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 100; SEQ ID NO: 101; SEQ ID NO: 102; SEQ ID NO: 103; SEQ ID NO: 104; SEQ ID NO: 105; SEQ ID NO: 106; SEQ ID NO: 107; SEQ ID NO: 108; SEQ ID NO: 109; SEQ ID NO: 110; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 113; SEQ ID NO: 114; SEQ ID NO:

115; SEQ ID NO: 116; SEQ ID NO: 117; SEQ ID NO: 118; SEQ ID NO: 119; SEQ ID NO: 120; SEQ ID NO: 121; SEQ ID NO: 122; SEQ ID NO: 123; SEQ ID NO: 124; SEQ ID NO: 125; SEQ ID NO: 126; SEQ ID NO: 127; SEQ ID NO: 128; SEQ ID NO: 129; SEQ ID NO: 130; SEQ ID NO: 131; SEQ ID NO: 132; SEQ ID NO: 133; SEQ ID NO: 134; SEQ ID NO: 135; SEQ ID NO: 136; SEQ ID NO: 137; SEQ ID NO: 138; SEQ ID NO: 139; SEQ ID NO: 140; SEQ ID NO: 141; SEQ ID NO: 142; SEQ ID NO: 143; SEQ ID NO: 144; SEQ ID NO: 145; SEQ ID NO: 146; SEQ ID NO: 147; SEQ ID NO: 148; SEQ ID NO: 149; SEQ ID NO: 150; SEQ ID NO: 151; SEQ ID NO: 152; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186. Accordingly, these sequences may be used to identify a primary cell gene expression profile, which then may be used to classify unknown cell or tissue samples.

A primary cell gene expression profile may additionally comprise one or more of the following nucleic acid sequences: SEQ ID NO: 188; SEQ ID NO: 193; SEQ ID NO: 216; SEQ ID NO: 224; SEQ ID NO: 230; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 250; SEQ ID NO: 253; SEQ ID NO: 271; SEQ ID NO: 281; SEQ ID NO: 324; SEQ ID NO: 337; SEQ ID NO: 346; SEQ ID NO: 388; SEQ ID NO: 403; SEQ ID NO: 410; SEQ ID NO: 415; SEQ ID NO: 421; SEQ ID NO: 422; SEQ ID NO: 425; SEQ ID NO: 427; SEQ ID NO: 428; SEQ ID NO: 432; SEQ ID NO: 433; SEQ ID NO: 437; SEQ ID NO: 440; SEQ ID NO: 443; SEQ ID NO: 444; SEQ ID NO: 447; SEQ ID NO: 449; SEQ ID NO: 451; SEQ ID NO: 452; SEQ ID NO: 455; SEQ ID NO: 457; SEQ ID NO: 460; SEQ ID NO: 462; SEQ ID NO: 465; SEQ ID NO: 466; SEQ ID NO: 476; SEQ ID NO: 477; SEQ ID NO: 482; SEQ ID NO: 484; SEQ ID NO: 490; SEQ ID NO: 492; SEQ ID NO: 493; SEQ ID NO: 495; SEQ ID NO: 498; SEQ ID NO: 499; SEQ ID NO: 502; SEQ ID NO: 504; SEQ ID NO: 505; SEQ ID NO: 514; SEQ ID NO: 515; SEQ ID NO: 518; SEQ ID NO: 524; SEQ ID NO: 528; SEQ ID NO: 530; SEQ ID NO: 531; SEQ ID NO: 532; SEQ ID NO: 536; SEQ ID NO: 539; SEQ ID NO: 541; SEQ ID NO: 545; SEQ ID NO: 551; SEQ ID NO: 563; SEQ ID NO: 565; SEQ ID NO: 567; SEQ ID NO: 573; SEQ ID NO: 577; SEQ ID NO: 580; SEQ ID NO: 582; SEQ ID NO: 585;

SEQ ID NO: 588; SEQ ID NO: 590; SEQ ID NO: 592; SEQ ID NO: 594; SEQ ID NO: 595;
 SEQ ID NO: 598; SEQ ID NO: 599; SEQ ID NO: 601; SEQ ID NO: 605; SEQ ID NO: 607;
 SEQ ID NO: 608; SEQ ID NO: 613; SEQ ID NO: 623; SEQ ID NO: 625; SEQ ID NO: 626;
 SEQ ID NO: 631; SEQ ID NO: 650; SEQ ID NO: 652; SEQ ID NO: 654; SEQ ID NO: 657;
 5 SEQ ID NO: 661; SEQ ID NO: 665; SEQ ID NO: 671; SEQ ID NO: 672; SEQ ID NO: 673;
 SEQ ID NO: 674; SEQ ID NO: 675; SEQ ID NO: 676; SEQ ID NO: 677; SEQ ID NO: 678;
 SEQ ID NO: 680; SEQ ID NO: 681; SEQ ID NO: 684; SEQ ID NO: 685; SEQ ID NO: 686;
 SEQ ID NO: 687; SEQ ID NO: 688; SEQ ID NO: 689; SEQ ID NO: 690; SEQ ID NO: 691;
 SEQ ID NO: 692; SEQ ID NO: 694; SEQ ID NO: 695; SEQ ID NO: 696; SEQ ID NO: 697;
 10 SEQ ID NO: 698; SEQ ID NO: 699; SEQ ID NO: 700; SEQ ID NO: 701; SEQ ID NO: 702;
 SEQ ID NO: 704; SEQ ID NO: 705; SEQ ID NO: 706; SEQ ID NO: 707; SEQ ID NO: 708;
 SEQ ID NO: 709; SEQ ID NO: 710; SEQ ID NO: 711; SEQ ID NO: 712; SEQ ID NO: 713;
 SEQ ID NO: 714; SEQ ID NO: 715; SEQ ID NO: 716; SEQ ID NO: 717; SEQ ID NO: 718;
 SEQ ID NO: 719; SEQ ID NO: 720; SEQ ID NO: 721; SEQ ID NO: 722; SEQ ID NO: 723;
 15 SEQ ID NO: 724; SEQ ID NO: 725; SEQ ID NO: 726; SEQ ID NO: 727; SEQ ID NO: 728;
 SEQ ID NO: 729; SEQ ID NO: 730; SEQ ID NO: 731; SEQ ID NO: 732; SEQ ID NO: 733;
 SEQ ID NO: 734; SEQ ID NO: 735; SEQ ID NO: 736; SEQ ID NO: 737; SEQ ID NO: 738;
 SEQ ID NO: 739; SEQ ID NO: 740; SEQ ID NO: 741; SEQ ID NO: 742; SEQ ID NO: 743;
 SEQ ID NO: 744; SEQ ID NO: 745; SEQ ID NO: 746; SEQ ID NO: 747; SEQ ID NO: 748;
 20 SEQ ID NO: 749; SEQ ID NO: 750; SEQ ID NO: 751; SEQ ID NO: 752; SEQ ID NO: 753;
 SEQ ID NO: 754; SEQ ID NO: 755; SEQ ID NO: 756; SEQ ID NO: 758; SEQ ID NO: 759;
 SEQ ID NO: 760; SEQ ID NO: 761; SEQ ID NO: 762; SEQ ID NO: 763; SEQ ID NO: 764;
 SEQ ID NO: 765; SEQ ID NO: 766; SEQ ID NO: 767; SEQ ID NO: 768; SEQ ID NO: 769;
 SEQ ID NO: 770; SEQ ID NO: 771; SEQ ID NO: 772; SEQ ID NO: 773; SEQ ID NO: 774;
 25 SEQ ID NO: 775; SEQ ID NO: 776; SEQ ID NO: 777; SEQ ID NO: 778; SEQ ID NO: 779;
 SEQ ID NO: 780; SEQ ID NO: 781; SEQ ID NO: 782; SEQ ID NO: 783; SEQ ID NO: 784;
 SEQ ID NO: 785; SEQ ID NO: 786; SEQ ID NO: 787; SEQ ID NO: 788; SEQ ID NO: 789;
 SEQ ID NO: 790; SEQ ID NO: 791; SEQ ID NO: 792; SEQ ID NO: 793; SEQ ID NO: 794;
 SEQ ID NO: 795; SEQ ID NO: 796; SEQ ID NO: 797; SEQ ID NO: 798; SEQ ID NO: 799;
 30 SEQ ID NO: 800; SEQ ID NO: 801; SEQ ID NO: 802; and SEQ ID NO: 803.

As the example shows, primary cell gene expression profile may also comprise, for instance, the nucleic acid sequences having the following accession numbers: INCYTE 2997284H1; INCYTE 1726828F6; INCYTE 1690295F6; INCYTE 530695T6; INCYTE

2313677H1; INCYTE 2510757F6; INCYTE 1696122T6; GB M20566; INCYTE
 1742456R6; INCYTE 3584702H1; INCYTE 2222054H1; INCYTE 928019R6; INCYTE
 1716001T6; INCYTE 2211526T6; INCYTE 2604309F6; INCYTE 3269857F6; INCYTE
 1751294F6; INCYTE 3118530H1; INCYTE 1519824H1; INCYTE 1429303H1; INCYTE
 5 449937H1; INCYTE 150224T6; INCYTE 1652456H1; INCYTE 2116716T6; INCYTE
 637471CA2; INCYTE 3105066H1; INCYTE 1946704H1; INCYTE 5547273H1; INCYTE
 2194901H1; INCYTE 3097063H1; INCYTE 399998H1; INCYTE 3320154H1; GB X87344;
 INCYTE 2169635T6; and INCYTE 767295H1.

Figure 10 displays the genes that comprise an endothelial gene expression profile.

10 Specifically, an endothelial gene expression profile may comprise one or more nucleic acid
 sequences including, but not limited to, SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ
 ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9;
 SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ
 ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID
 15 NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO:
 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144. Accordingly,
 these sequences may be used to identify an endothelial gene expression profile, which then
 may be used to classify unknown cell or tissue samples.

An endothelial gene expression profile may additionally comprise one or more
 20 nucleic acid sequences including, but not limited to, SEQ ID NO: 427; SEQ ID NO: 460;
 SEQ ID NO: 484; SEQ ID NO: 565; SEQ ID NO: 580; SEQ ID NO: 590; SEQ ID NO: 670;
 SEQ ID NO: 672; SEQ ID NO: 673; SEQ ID NO: 674; SEQ ID NO: 675; SEQ ID NO: 676;
 SEQ ID NO: 677; SEQ ID NO: 678; SEQ ID NO: 680; SEQ ID NO: 723; SEQ ID NO: 741;
 and SEQ ID NO: 754.

25 As the example shows, an endothelial gene expression profile may also comprise, for
 example, the nucleic acid sequences having the following accession numbers: INCYTE
 530695T6 and INCYTE 1716001T6.

The gene expression profile depicted in Figure 11 may be used to identify epithelial
 cells. Specifically, an epithelial gene expression profile may comprise one or more nucleic
 30 acid sequences including, but not limited to, SEQ ID NO: 47; SEQ ID NO: 60; SEQ ID NO:
 67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78;
 SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 111; SEQ
 ID NO: 112; SEQ ID NO: 117; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID NO: 131; SEQ

ID NO: 150; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; SEQ ID NO: 186.

Figure 12 shows the gene expression profile generated from muscle cells. In one embodiment, a muscle cell gene expression profile may comprise one or more nucleic acid sequences including, but not limited to, SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 38; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69. Accordingly, these sequences may be used to identify a muscle gene expression profile, which then may be used to classify unknown cell or tissue samples.

A muscle gene expression profile may additionally comprise one or more nucleic acid sequences including, but not limited to, SEQ ID NO: 188; SEQ ID NO: 193; SEQ ID NO: 216; SEQ ID NO: 250; SEQ ID NO: 499; SEQ ID NO: 504; SEQ ID NO: 563; SEQ ID NO: 652; SEQ ID NO: 681; SEQ ID NO: 682; SEQ ID NO: 683; SEQ ID NO: 684; SEQ ID NO: 685; SEQ ID NO: 686; SEQ ID NO: 687; SEQ ID NO: 688; SEQ ID NO: 689; SEQ ID NO: 690; and SEQ ID NO: 691.

Example 4: Gene Expression Profiles for Epithelial Cell Subtypes

Gene expression profiles that define a particular type of epithelial cell were generated using the methodologies, microarrays and algorithms of the present invention. Epithelial cell lines were used to generate the cell type specific gene expression profiles. The epithelial cell lines used in this example were derived from various tissues including keratinocyte epithelium, mammary epithelium, bronchial epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, and renal epithelium.

Complementary DNA made from each of the eight cell lines was used to probe the microarray. Briefly, and as described in the previous examples, total RNA was extracted, amplified, and labeled. The resultant labeled cDNAs were hybridized to microarray chips. Following one or more washing steps, the microarrays were scanned and the intensity of the spots was recorded and converted into a numerical value and normalized. Next, the algorithms of the present invention were applied to extract a gene expression profile that defined the subtype of epithelial cell.

The microarrays used in this example comprised the following nucleic acid sequences: SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; SEQ ID NO: 211; SEQ ID NO: 150; SEQ ID NO: 27; SEQ ID NO: 169; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 131; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 216; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 138; SEQ ID NO: 219; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 228; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 78; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 236; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 239; SEQ ID NO: 240; SEQ ID NO: 241; SEQ ID NO: 242; SEQ ID NO: 243; SEQ ID NO: 64; SEQ ID NO: 244; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 250; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 253; SEQ ID NO: 254; SEQ ID NO: 37; SEQ ID NO: 106; SEQ ID NO: 255; SEQ ID NO: 123; SEQ ID NO: 256; SEQ ID NO: 257; SEQ ID NO: 258; SEQ ID NO: 259; SEQ ID NO: 260; SEQ ID NO: 261; SEQ ID NO: 262; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 266; SEQ ID NO: 267; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 57; SEQ ID NO: 70; SEQ ID NO: 270; SEQ ID NO: 271; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 277; SEQ ID NO: 278; SEQ ID NO: 279; SEQ ID NO: 104; SEQ ID NO: 280; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 283; SEQ ID NO: 284; SEQ ID NO: 285; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 288; SEQ ID NO: 160; SEQ ID NO: 289; SEQ ID NO: 290; SEQ ID NO: 291; SEQ ID NO: 293; SEQ ID NO: 294; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID

NO: 49; SEQ ID NO: 298; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID
 NO: 302; SEQ ID NO: 303; SEQ ID NO: 304; SEQ ID NO: 305; SEQ ID NO: 306; SEQ ID
 NO: 307; SEQ ID NO: 308; SEQ ID NO: 183; SEQ ID NO: 309; SEQ ID NO: 310; SEQ ID
 NO: 311; SEQ ID NO: 312; SEQ ID NO: 313; SEQ ID NO: 314; SEQ ID NO: 315; SEQ ID
 5 NO: 316; SEQ ID NO: 310; SEQ ID NO: 317; SEQ ID NO: 174; SEQ ID NO: 318; SEQ ID
 NO: 320; SEQ ID NO: 173; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 323; SEQ ID
 NO: 324; SEQ ID NO: 325; SEQ ID NO: 326; SEQ ID NO: 158; SEQ ID NO: 327; SEQ ID
 NO: 328; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 329

Figure 18 shows the results from all eight of the hybridizations. The cutoff value was
 10 set for expression values over 2.0, *i.e.*, two-fold induction over baseline. This particular
 portrayal of the data shows the relative expression values sorted for keratinocyte epithelial
 cells. Several genes, specifically, nucleic acid sequences SEQ ID NO: 187; SEQ ID NO:
 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO:
 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO:
 15 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO:
 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO:
 208; SEQ ID NO: 209; SEQ ID NO: 210; and SEQ ID NO: 211, show a relative expression
 value over 2.0, which is the cut-off in the context of the algorithm. These genes represent
 signature genes, *i.e.*, a gene expression profile of keratinocyte epithelial cells, which may be
 20 used to identify and classify unknown samples.

With regard to the other columns, it is possible to sort the data and identify genes
 representing gene expression profiles of a particular cell type. For example, and referring to
 Figure 18, sorting the data based on relative expression values and using the value of 2.0 as a
 cutoff in the context of the algorithm, the following genes represent a mammary epithelial
 25 cells gene expression profile: SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID
 NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 78; SEQ ID NO: 239; SEQ ID
 NO: 271; SEQ ID NO: 285; and SEQ ID NO: 289.

Similarly, and referring to Figure 18, sorting the data based on relative expression
 values and using the value of 2.0 as a cutoff in the context of the algorithm, the following
 30 genes represent a bronchial epithelial cells gene expression profile: SEQ ID NO: 150; SEQ ID
 NO: 27; SEQ ID NO: 169; SEQ ID NO: 131; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID
 NO: 223; SEQ ID NO: 224; SEQ ID NO: 241; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID
 NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314.

Referring to Figure 18, sorting the data based on relative expression values and using the value of 2.0 as a cutoff in the context of the algorithm, the following genes represent a prostate epithelial cells gene expression profile: SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 64; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID NO: 320.

5 Likewise, referring to Figure 18, sorting the data based on relative expression values and using the value of 2.0 as a cutoff in the context of the algorithm, the following genes represent a renal cortical epithelial cells gene expression profile: SEQ ID NO: 219; SEQ ID NO: 123; SEQ ID NO: 267; SEQ ID NO: 57; SEQ ID NO: 270; SEQ ID NO: 279; SEQ ID NO: 104; SEQ ID NO: 28; SEQ ID NO: 283; SEQ ID NO: 160; SEQ ID NO: 291; SEQ ID
10 NO: 300; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 310; SEQ ID NO: 325; SEQ ID NO: 326; SEQ ID NO: 327; SEQ ID NO: 165; and SEQ ID NO: 166.

Referring to Figure 18, sorting the data based on relative expression values and using the value of 2.0 as a cutoff in the context of the algorithm, the following genes represent a
15 renal proximal tubule epithelial cells gene expression profile: SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO:
20 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 311; SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329.

Moreover, and referring to Figure 18, sorting the data based on relative expression values and using the value of 2.0 as a cutoff in the context of the algorithm, the following
25 genes represent a small airway epithelial cells gene expression profile: SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249;
30 SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287;

SEQ ID NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319.

Still further, and referring to Figure 18, sorting the data based on relative expression values and using the value of 2.0 as a cutoff in the context of the algorithm, the following
5 genes represent a renal epithelial cells gene expression profile: SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324.

Example 5: Rat Toxicology Reference Database

To assess the toxicity of known compounds on gene and/or protein expression, a rat
10 expression database is constructed. The database consists of gene expression profiles and protein expression profiles, as well as serum chemistry, hematology measurements, histopathology, and general clinical observations, from 100 different compounds at two doses and at two timepoints per dose. The compounds contain at least 10 different mechanisms of liver and kidney toxicity.

15 Sprague-Dawley rats are treated with compound via intraperitoneal administration. Dose groups include a low dose and a high dose for a 24-hour exposure and a low dose and a high dose for a 72-hour exposure. Three animals are treated per dose group as well as two control animal per timepoint. Following treatment, tissue are collected for gene expression and/or protein expression analysis including liver, kidney, white blood cells, lung, heart,
20 intestine, testes, and spleen. Other toxicological evaluations include serum chemistry, hematology, organ weights, animal weights, and clinical observations.

Dose selection is based on literature reports with low dose defined as the lowest historical dose that elicited an endpoint and high dose is defined as the dose reported to result in a significant number of animals exhibiting characteristic toxicity.

25 The toxic effects of these compounds on gene expression and protein expression are analyzed using a toxicity microarray. For each compound, 15 rats are treated with the compound and tissue samples from each rat are collected and analyzed. The expression patterns in liver, kidney, heart, brain, intestine, testes, spleen, and white blood cells are analyzed following treatment with a toxic compounds. To generate the target nucleic acids,
30 RNA or protein is isolated from each tissue sample and prepared for microarray hybridization as described above. Genes and/or proteins demonstrating alterations in expression level are selected for inclusion on the rat toxicity microarray. In addition, approximately 600 genes and/or protein-capture agents derived therefrom identified as toxicologically relevant based

on review of the scientific literature are also be included on the microarray. In total, about 4,000 cDNAs or protein-capture agents reflecting the genes and/or proteins susceptible to the toxicity of these compounds.

Data reflecting the gene expression profiles of each tissue and toxin is placed in the database including an annotation describing dosage and clinical observations. The database provides information describing mechanisms of action as well as previously reported alterations of gene expression observed following administration of these compounds. The database is also used in the drug discovery process by providing information which permits the elimination of potentially toxic compounds.

Example 6: Expression Profiles As A Diagnostic For Disease

The microarray technology may also be used to identify a particular disease (*e.g.*, cancer), and provide a patient diagnosis. Initially, reference genes and/or proteins are generated for both normal and cancer cell types. Isolated cell types are derived by a number of methods known in the art (*e.g.*, FACS sorting, magnoferric solutions, magnetic beads in combination with cell-specific antibodies). Cells from tissues are isolated by tissue staining with a cell-specific antibody, followed by laser capture microscopy or electrostatic methods. RNA is isolated from the cells and then probes are created for the generation of microarrays using the methods described above. Similarly, protein may be isolated from the cells and used to probe a microarray comprising protein-capture agents using the methods described above.

Data from the microarrays for each cell type is then placed in a database along with an annotation describing cell type and location. Using cluster analysis and algorithms, gene and/or protein expression profiles for each cell type are determined.

For a diagnosis of Hodgkin lymphoma or non-Hodgkin lymphoma, biological samples are collected from patients and RNA or protein is isolated from the samples, as described above. The cDNA or protein is then hybridized to microarrays containing genes or protein-capture agents representing normal, Hodgkin lymphoma, and non-Hodgkin lymphoma samples. Based on the gene expression profiles and/or protein expression profiles, patients are diagnosed with either Hodgkin lymphoma or non-Hodgkin lymphoma.

The expression data from these patient samples is then added to the database. In addition, clinical information regarding the patient and treatment course as well as clinical

outcome are also included in the database; thus, providing expression profiles for disease, disease stage, and outcome.

Microarray technology is also used to identify a course of treatment and as a drug discovery method. Normal and tumorigenic cells are treated with a known cancer drug (*e.g.*, tamoxifen) or a novel pharmacological agent. As described above, RNA or protein is isolated and then hybridized to a microarray containing normal and cancer cell genes or protein-capture agents. A comparison of the expression levels following treatment provides an expression profile of the particular drug indicating which genes or proteins are activated or deactivated by the drug. This information is also added to the database. The database thus contains information describing the gene expression profiles and/or protein expression profiles of normal and cancer cells, gene expression profiles and/or protein expression profiles of patient samples, gene expression profiles and/or protein expression profiles of patients undergoing treatment, and gene expression profiles and/or protein expression profiles of *in vitro* cell studies. This information is used to diagnose and classify a disease, select and monitor a treatment course, and identify a prognostic indicator.

Various modifications and variations of the described methods and systems of the invention will be apparent to those skilled in the art without departing from the scope and spirit of the invention. Although the invention has been described in connection with specific preferred embodiments, it should be understood that the invention as claimed should not be unduly limited to such specific embodiments. Indeed, various modifications of the described modes for carrying out the invention which are obvious to those skilled in molecular biology or related fields are intended to be within the scope of the following claims.

We claim:

1. An endothelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO: 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144.
2. A muscle cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69.
3. A primary cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43; SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO: 59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID NO: 63; SEQ ID

NO: 64; SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 79; SEQ ID NO: 80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID NO: 83; SEQ ID NO: 84; SEQ ID NO: 85; SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO: 88; SEQ ID NO: 89; SEQ ID NO: 90; SEQ ID NO: 91; SEQ ID NO: 92; SEQ ID NO: 93; SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID NO: 96; SEQ ID NO: 97; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 100; SEQ ID NO: 101; SEQ ID NO: 102; SEQ ID NO: 103; SEQ ID NO: 104; SEQ ID NO: 105; SEQ ID NO: 106; SEQ ID NO: 107; SEQ ID NO: 108; SEQ ID NO: 109; SEQ ID NO: 110; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 113; SEQ ID NO: 114; SEQ ID NO: 115; SEQ ID NO: 116; SEQ ID NO: 118; SEQ ID NO: 119; SEQ ID NO: 120; SEQ ID NO: 121; SEQ ID NO: 122; SEQ ID NO: 123; SEQ ID NO: 124; SEQ ID NO: 125; SEQ ID NO: 126; SEQ ID NO: 127; SEQ ID NO: 128; SEQ ID NO: 129; SEQ ID NO: 130; SEQ ID NO: 131; SEQ ID NO: 132; SEQ ID NO: 133; SEQ ID NO: 134; SEQ ID NO: 135; SEQ ID NO: 136; SEQ ID NO: 137; SEQ ID NO: 138; SEQ ID NO: 139; SEQ ID NO: 140; SEQ ID NO: 141; SEQ ID NO: 142; SEQ ID NO: 143; SEQ ID NO: 144; SEQ ID NO: 145; SEQ ID NO: 146; SEQ ID NO: 147; SEQ ID NO: 148; SEQ ID NO: 149; SEQ ID NO: 150; SEQ ID NO: 151; SEQ ID NO: 152; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

4. An epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 47; SEQ ID NO: 60; SEQ ID NO: 67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155;

SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

5. A keratinocyte epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; and SEQ ID NO: 211.
6. A mammary epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 78; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 239; SEQ ID NO: 271; SEQ ID NO: 285; and SEQ ID NO: 289.
7. A bronchial epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 169; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 241; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314.

8. A prostate epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 64; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID NO: 320.
9. A renal cortical epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 104; SEQ ID NO: 123; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 219; SEQ ID NO: 267; SEQ ID NO: 270; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 283; SEQ ID NO: 291; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 325; SEQ ID NO: 326; and SEQ ID NO: 327.
10. A renal proximal tubule epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 311; SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329.
11. A small airway epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID

NO: 248; SEQ ID NO: 249; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319.

12. A renal epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof selected from the group selected from the group consisting of SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324.
13. A gene expression profile comprising one or more genes, wherein said gene expression profile is generated from a cell type selected from the group consisting of coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.
14. A microarray comprising an endothelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 48; SEQ ID NO: 63; SEQ ID NO: 70; SEQ ID NO: 82; SEQ ID NO: 94; and SEQ ID NO: 144.

15. A microarray comprising muscle cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 54; SEQ ID NO: 55; and SEQ ID NO: 69.
16. A microarray comprising a primary cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 6; SEQ ID NO: 7; SEQ ID NO: 8; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 11; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; SEQ ID NO: 30; SEQ ID NO: 31; SEQ ID NO: 32; SEQ ID NO: 33; SEQ ID NO: 34; SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 39; SEQ ID NO: 40; SEQ ID NO: 41; SEQ ID NO: 42; SEQ ID NO: 43; SEQ ID NO: 44; SEQ ID NO: 45; SEQ ID NO: 46; SEQ ID NO: 47; SEQ ID NO: 48; SEQ ID NO: 49; SEQ ID NO: 50; SEQ ID NO: 51; SEQ ID NO: 52; SEQ ID NO: 53; SEQ ID NO: 54; SEQ ID NO: 55; SEQ ID NO: 56; SEQ ID NO: 57; SEQ ID NO: 58; SEQ ID NO: 59; SEQ ID NO: 60; SEQ ID NO: 61; SEQ ID NO: 62; SEQ ID NO: 63; SEQ ID NO: 64; SEQ ID NO: 65; SEQ ID NO: 66; SEQ ID NO: 67; SEQ ID NO: 68; SEQ ID NO: 69; SEQ ID NO: 70; SEQ ID NO: 71; SEQ ID NO: 72; SEQ ID NO: 73; SEQ ID NO: 74; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 79; SEQ ID NO: 80; SEQ ID NO: 81; SEQ ID NO: 82; SEQ ID NO: 83; SEQ ID NO: 84; SEQ ID NO: 85; SEQ ID NO: 86; SEQ ID NO: 87; SEQ ID NO: 88; SEQ ID NO: 89; SEQ ID NO: 90; SEQ ID NO: 91; SEQ ID NO: 92; SEQ ID NO: 93; SEQ ID NO: 94; SEQ ID NO: 95; SEQ ID NO: 96; SEQ ID NO: 97; SEQ ID NO: 98;

SEQ ID NO: 99; SEQ ID NO: 100; SEQ ID NO: 101; SEQ ID NO: 102; SEQ ID NO: 103; SEQ ID NO: 104; SEQ ID NO: 105; SEQ ID NO: 106; SEQ ID NO: 107; SEQ ID NO: 108; SEQ ID NO: 109; SEQ ID NO: 110; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 113; SEQ ID NO: 114; SEQ ID NO: 115; SEQ ID NO: 116; SEQ ID NO: 118; SEQ ID NO: 119; SEQ ID NO: 120; SEQ ID NO: 121; SEQ ID NO: 122; SEQ ID NO: 123; SEQ ID NO: 124; SEQ ID NO: 125; SEQ ID NO: 126; SEQ ID NO: 127; SEQ ID NO: 128; SEQ ID NO: 129; SEQ ID NO: 130; SEQ ID NO: 131; SEQ ID NO: 132; SEQ ID NO: 133; SEQ ID NO: 134; SEQ ID NO: 135; SEQ ID NO: 136; SEQ ID NO: 137; SEQ ID NO: 138; SEQ ID NO: 139; SEQ ID NO: 140; SEQ ID NO: 141; SEQ ID NO: 142; SEQ ID NO: 143; SEQ ID NO: 144; SEQ ID NO: 145; SEQ ID NO: 146; SEQ ID NO: 147; SEQ ID NO: 148; SEQ ID NO: 149; SEQ ID NO: 150; SEQ ID NO: 151; SEQ ID NO: 152; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

17. A microarray comprising an epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 47; SEQ ID NO: 60; SEQ ID NO: 67; SEQ ID NO: 73; SEQ ID NO: 75; SEQ ID NO: 76; SEQ ID NO: 77; SEQ ID NO: 78; SEQ ID NO: 80; SEQ ID NO: 96; SEQ ID NO: 98; SEQ ID NO: 99; SEQ ID NO: 111; SEQ ID NO: 112; SEQ ID NO: 123; SEQ ID NO: 127; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 153; SEQ ID NO: 154; SEQ ID NO: 155; SEQ ID NO: 156; SEQ ID NO: 157; SEQ ID NO: 158; SEQ ID NO: 159; SEQ ID NO: 160; SEQ ID NO: 161; SEQ ID NO: 162; SEQ ID NO: 163; SEQ ID NO: 164; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 167; SEQ ID NO: 168; SEQ ID NO: 169; SEQ ID NO: 170; SEQ ID NO: 171; SEQ ID NO: 172; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 175; SEQ ID NO: 176; SEQ ID NO: 177; SEQ ID NO: 178; SEQ

ID NO: 179; SEQ ID NO: 180; SEQ ID NO: 181; SEQ ID NO: 182; SEQ ID NO: 183; SEQ ID NO: 184; SEQ ID NO: 185; and SEQ ID NO: 186.

18. A microarray comprising a keratinocyte epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; and SEQ ID NO: 211.
19. A microarray comprising a mammary epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 78; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 216; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 239; SEQ ID NO: 271; SEQ ID NO: 285; and SEQ ID NO: 289.
20. A microarray comprising a bronchial epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 131; SEQ ID NO: 150; SEQ ID NO: 169; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 241; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 261; and SEQ ID NO: 314.
21. A microarray comprising a prostate epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 64;

SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 259; SEQ ID NO: 293; SEQ ID NO: 302; and SEQ ID NO: 320.

22. A microarray comprising a renal cortical epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 104; SEQ ID NO: 123; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 219; SEQ ID NO: 267; SEQ ID NO: 270; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 283; SEQ ID NO: 291; SEQ ID NO: 305; SEQ ID NO: 307; SEQ ID NO: 310; SEQ ID NO: 313; SEQ ID NO: 325; SEQ ID NO: 326; and SEQ ID NO: 327.
23. A microarray comprising renal proximal tubule epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 106; SEQ ID NO: 138; SEQ ID NO: 158; SEQ ID NO: 228; SEQ ID NO: 236; SEQ ID NO: 242; SEQ ID NO: 250; SEQ ID NO: 258; SEQ ID NO: 260; SEQ ID NO: 262; SEQ ID NO: 266; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 278; SEQ ID NO: 284; SEQ ID NO: 288; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 306; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 311; SEQ ID NO: 316; SEQ ID NO: 318; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 328; and SEQ ID NO: 329.
24. A microarray comprising a small airway epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 240; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ

ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 251; SEQ ID NO: 252; SEQ ID NO: 254; SEQ ID NO: 257; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 277; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 290; SEQ ID NO: 294; SEQ ID NO: 298; SEQ ID NO: 303; SEQ ID NO: 312; SEQ ID NO: 315; SEQ ID NO: 317; and SEQ ID NO: 319.

25. A microarray comprising a renal epithelial cell gene expression profile comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 37; SEQ ID NO: 253; SEQ ID NO: 304; SEQ ID NO: 323; and SEQ ID NO: 324.
26. A microarray comprising one or more nucleic acid sequences substantially homologous to a nucleic acid sequence or complementary sequence thereof, or portions of said nucleic acid sequence or complementary sequence thereof, selected from the group consisting of SEQ ID NO: 27; SEQ ID NO: 37; SEQ ID NO: 49; SEQ ID NO: 57; SEQ ID NO: 64; SEQ ID NO: 70; SEQ ID NO: 78; SEQ ID NO: 104; SEQ ID NO: 106; SEQ ID NO: 123; SEQ ID NO: 131; SEQ ID NO: 138; SEQ ID NO: 150; SEQ ID NO: 158; SEQ ID NO: 160; SEQ ID NO: 165; SEQ ID NO: 166; SEQ ID NO: 169; SEQ ID NO: 173; SEQ ID NO: 174; SEQ ID NO: 183; SEQ ID NO: 187; SEQ ID NO: 188; SEQ ID NO: 189; SEQ ID NO: 190; SEQ ID NO: 191; SEQ ID NO: 192; SEQ ID NO: 193; SEQ ID NO: 194; SEQ ID NO: 195; SEQ ID NO: 196; SEQ ID NO: 197; SEQ ID NO: 198; SEQ ID NO: 199; SEQ ID NO: 200; SEQ ID NO: 201; SEQ ID NO: 202; SEQ ID NO: 203; SEQ ID NO: 204; SEQ ID NO: 205; SEQ ID NO: 206; SEQ ID NO: 207; SEQ ID NO: 208; SEQ ID NO: 209; SEQ ID NO: 210; SEQ ID NO: 211; SEQ ID NO: 212; SEQ ID NO: 213; SEQ ID NO: 214; SEQ ID NO: 215; SEQ ID NO: 216; SEQ ID NO: 217; SEQ ID NO: 218; SEQ ID NO: 219; SEQ ID NO: 220; SEQ ID NO: 221; SEQ ID NO: 222; SEQ ID NO: 223; SEQ ID NO: 224; SEQ ID NO: 225; SEQ ID NO: 226; SEQ ID NO: 227; SEQ ID NO: 228; SEQ ID NO: 229; SEQ ID NO: 230; SEQ ID NO: 231; SEQ ID NO: 232; SEQ ID NO: 233; SEQ ID NO: 234; SEQ ID NO: 235; SEQ ID NO: 236; SEQ ID NO: 237; SEQ ID NO: 238; SEQ ID NO: 239; SEQ ID NO: 240; SEQ ID NO: 241; SEQ ID NO: 242; SEQ ID NO: 243; SEQ ID NO: 244; SEQ ID NO: 245; SEQ ID NO: 246; SEQ ID NO: 247; SEQ ID NO: 248; SEQ ID NO: 249; SEQ ID NO: 250; SEQ ID NO: 251;

SEQ ID NO: 252; SEQ ID NO: 253; SEQ ID NO: 254; SEQ ID NO: 255; SEQ ID NO: 256; SEQ ID NO: 257; SEQ ID NO: 258; SEQ ID NO: 259; SEQ ID NO: 260; SEQ ID NO: 261; SEQ ID NO: 262; SEQ ID NO: 263; SEQ ID NO: 264; SEQ ID NO: 265; SEQ ID NO: 266; SEQ ID NO: 267; SEQ ID NO: 268; SEQ ID NO: 269; SEQ ID NO: 270; SEQ ID NO: 271; SEQ ID NO: 272; SEQ ID NO: 273; SEQ ID NO: 274; SEQ ID NO: 275; SEQ ID NO: 276; SEQ ID NO: 277; SEQ ID NO: 278; SEQ ID NO: 279; SEQ ID NO: 280; SEQ ID NO: 281; SEQ ID NO: 282; SEQ ID NO: 283; SEQ ID NO: 284; SEQ ID NO: 285; SEQ ID NO: 286; SEQ ID NO: 287; SEQ ID NO: 288; SEQ ID NO: 289; SEQ ID NO: 290; SEQ ID NO: 291; SEQ ID NO: 293; SEQ ID NO: 294; SEQ ID NO: 295; SEQ ID NO: 296; SEQ ID NO: 297; SEQ ID NO: 298; SEQ ID NO: 299; SEQ ID NO: 300; SEQ ID NO: 301; SEQ ID NO: 302; SEQ ID NO: 303; SEQ ID NO: 304; SEQ ID NO: 305; SEQ ID NO: 306; SEQ ID NO: 307; SEQ ID NO: 308; SEQ ID NO: 309; SEQ ID NO: 310; SEQ ID NO: 311; SEQ ID NO: 312; SEQ ID NO: 313; SEQ ID NO: 314; SEQ ID NO: 315; SEQ ID NO: 316; SEQ ID NO: 317; SEQ ID NO: 318; SEQ ID NO: 320; SEQ ID NO: 321; SEQ ID NO: 322; SEQ ID NO: 323; SEQ ID NO: 324; SEQ ID NO: 325; SEQ ID NO: 326; SEQ ID NO: 327; SEQ ID NO: 328; and SEQ ID NO: 329.

27. A microarray comprising a gene expression profile comprising one or more genes or oligonucleotide probes obtained therefrom, wherein said gene expression profile is generated from a cell type selected from the group comprising coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.
28. A method of determining the level of RNA expression for a sample comprising the steps of:

determining the level of RNA expression for an RNA sample, wherein said RNA sample is amplified, fluorescently labeled, and hybridized to a microarray containing a plurality of nucleic acid sequences, and wherein said microarray is scanned for fluorescence;

normalizing said expression level using an algorithm; and

scoring said RNA sample against a gene expression profile database.

29. The method of claim 28, wherein said RNA sample is obtained from a patient.
30. The method of claim 29, wherein said RNA sample is selected from the group consisting of blood, urine, amniotic fluid, plasma, semen, bone marrow, and tissue biopsy.
31. The method of claim 28, wherein said algorithm is the MaxCor algorithm.
32. The method of claim 28, wherein said algorithm is the Mean Log Ratio algorithm.
33. A method for constructing a gene expression profile comprising the steps of:
- hybridizing prepared RNA samples to at least one microarray containing a plurality of nucleic acid sequences representing human genes;
 - obtaining an expression level for each of said plurality of nucleic acid sequences representing human genes on each of said at least one microarrays; and
 - normalizing said expression level for each of said plurality of nucleic acid sequences representing human genes on each of said at least one microarrays to control standards.
34. The method of claim 33 further comprising the steps of:
- applying an algorithm to each of said normalized gene expression levels;
 - performing a correlation analysis for all of said normalized gene expression microarrays within a group of samples;
 - establishing a gene expression profile; and
 - validating the gene expression profile.
35. The method of claim 34, wherein said algorithm is the MaxCor algorithm.

36. The method of claim 35, wherein applying said MaxCor algorithm to each of said normalized gene expression levels assigns a numeric value to each gene represented on said at least one microarray based upon expression level.
37. The method of claim 36, wherein said numeric value is a number between the range of (-1,+1).
38. The method of claim 37, wherein a negative value of said numeric value represents a gene with relatively lower expression.
39. The method of claim 37, wherein a zero value of said numeric value represents no relative gene expression difference.
40. The method of claim 37, wherein a positive value of said numeric value represents a gene with relatively higher expression.
41. The method of claim 36, wherein said numeric value is a number between the range of (-2,+2).
42. The method of claim 41, wherein a negative value of said numeric value represents a gene with relatively lower expression.
43. The method of claim 41, wherein a zero value of said numeric value represents no relative gene expression difference.
44. The method of claim 41, wherein a positive value of said numeric value represents a gene with relatively higher expression.
45. The method of claim 34, wherein said algorithm is the Mean Log Ratio algorithm.
46. The method of claim 45, wherein applying said Mean Log Ratio algorithm to each of said gene expression microarrays assigns a numeric value to each gene contained on said microarray based upon expression level.

47. The method of claim 46, wherein said numeric value is between the range of $(-1,+1)$.
48. The method of claim 47, wherein a negative value of said numeric value represents a gene with relatively lower expression.
49. The method of claim 47, wherein a zero value of said numeric value represents no relative gene expression difference.
50. The method of claim 47, wherein a positive value of said numeric value represents a gene with relatively higher expression.
51. The method of claim 46, wherein said numeric value is a number between the range of $(-2,+2)$.
52. The method of claim 51, wherein a negative value of said numeric value represents a gene with relatively lower expression.
53. The method of claim 51, wherein a zero value of said numeric value represents no relative gene expression difference.
54. The method of claim 51, wherein a positive value of said numeric value represents a gene with relatively higher expression.
55. A method, in a computer system, for constructing and analyzing a gene expression profile comprising the steps of:
- inputting gene expression data for each of a plurality of genes;
 - normalizing expression data by transforming said data into log ratio values;
 - filtering weak differential values;
 - applying an algorithm to each of said normalized gene expression values;
 - performing a classification analysis for all of said normalized gene expression values;
 - establishing a gene expression profile; and
 - validating the gene expression profile.
56. The method of claim 55, wherein said algorithm is the MaxCor algorithm.

57. The method of claim 55, wherein said algorithm is the Mean Log Ratio algorithm.
58. A computer program for constructing and analyzing a gene expression profile comprising:
- computer code that receives as input gene expression data for a plurality of genes;
 - computer code that normalizes expression data by transforming said data into log ratio values;
 - computer code that applies an algorithm to each of said normalized gene expression values;
 - computer code that performs a correlation analysis for all of said normalized gene expression values;
 - computer code that establishes and validates the gene expression profile; and
 - computer readable medium that stores computer code.
59. The computer program of claim 58, wherein said algorithm is the MaxCor algorithm.
60. The computer program of claim 58, wherein said algorithm is the Mean Log Ratio algorithm.
61. A method for determining the phenotype of a cell comprising the steps of
- applying an algorithm to extract a gene expression profile from gene expression data generated from said cell; and
 - matching said gene expression profile to a gene expression profile generated from a cell of known phenotype.
62. The method of claim 61, wherein said algorithm is the MaxCor algorithm.
63. The method of claim 61, wherein said algorithm is the Mean Log Ratio algorithm.
64. The method of claim 61, wherein said applying step comprises setting a cutoff value for expression relative to normalized values, wherein said cutoff value is at least about two-fold induction above the normalized values.

65. The method of claim 61, wherein said matching step is performed using a database comprising one or more gene expression profiles generated from cells of known phenotype.
66. A method for distinguishing cell types comprising the step of matching a gene expression profile generated from a biological sample using an algorithm to a known gene expression profile of a specific cell type.
67. The method of claim 66, wherein said algorithm is the MaxCor algorithm.
68. The method of claim 66, wherein said algorithm is the Mean Log Ratio algorithm.
69. The method of claim 66, wherein said specific cell type is selected from the group consisting of coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.
70. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 1.
71. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 2.
72. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 3.

73. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 4
74. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 5.
75. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 6.
76. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 7.
77. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 8.
78. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 9.
79. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 10.
80. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 11.

81. A microarray comprising one or more protein-capture agents that specifically bind to all or a portion of one or more of the proteins encoded by the genes comprising the gene expression profile of claim 12.
82. A method for determining the phenotype of a cell comprising the steps of
 applying an algorithm to extract a protein expression profile from protein expression data generated from said cell; and
 matching said protein expression profile to a protein expression profile generated from a cell of known phenotype.
83. The method of claim 82, wherein said algorithm is the MaxCor algorithm.
84. The method of claim 82, wherein said algorithm is the Mean Log Ratio algorithm.
85. The method of claim 82, wherein said applying step comprises setting a cutoff value for expression relative to normalized values, wherein said cutoff value is at least about two-fold induction above the normalized values.
86. The method of claim 82, wherein said matching step is performed using a database comprising one or more protein expression profiles generated from cells of known phenotype.
87. A method for distinguishing cell types comprising the step of matching a protein expression profile generated from a biological sample using an algorithm to a known protein expression profile of a specific cell type.
88. The method of claim 87, wherein said algorithm is the MaxCor algorithm.
89. The method of claim 87, wherein said algorithm is the Mean Log Ratio algorithm.
90. The method of claim 87, wherein said specific cell type is selected from the group consisting of coronary artery endothelium, umbilical artery endothelium, umbilical vein endothelium, aortic endothelium, dermal microvascular endothelium, pulmonary artery endothelium, myometrium microvascular endothelium, keratinocyte epithelium, bronchial

epithelium, mammary epithelium, prostate epithelium, renal cortical epithelium, renal proximal tubule epithelium, small airway epithelium, renal epithelium, umbilical artery smooth muscle, neonatal dermal fibroblast, pulmonary artery smooth muscle, dermal fibroblast, neural progenitor cells, skeletal muscle, astrocytes, aortic smooth muscle, mesangial cells, coronary artery smooth muscle, bronchial smooth muscle, uterine smooth muscle, lung fibroblast, osteoblasts, and prostate stromal cells.

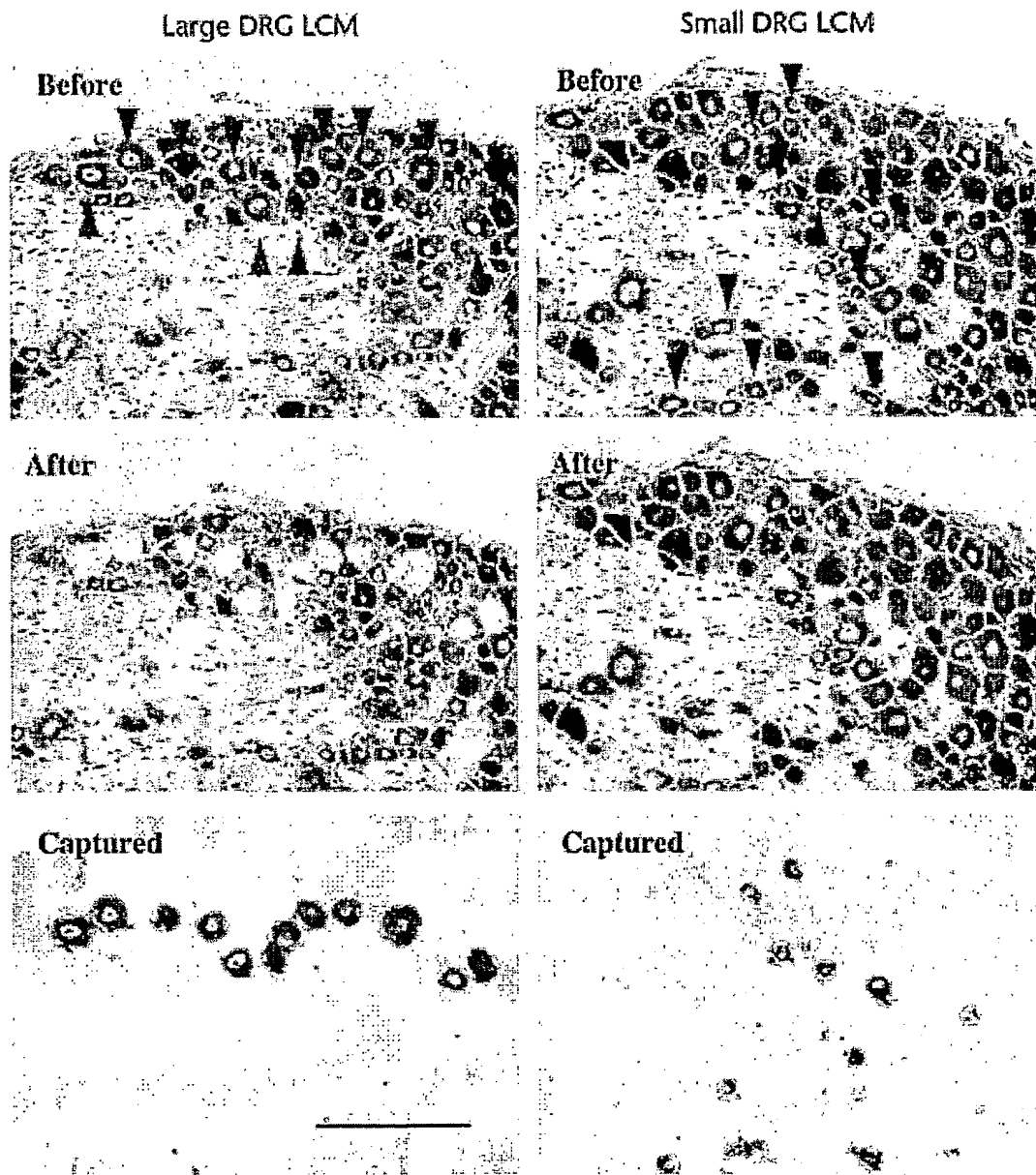


Figure 1

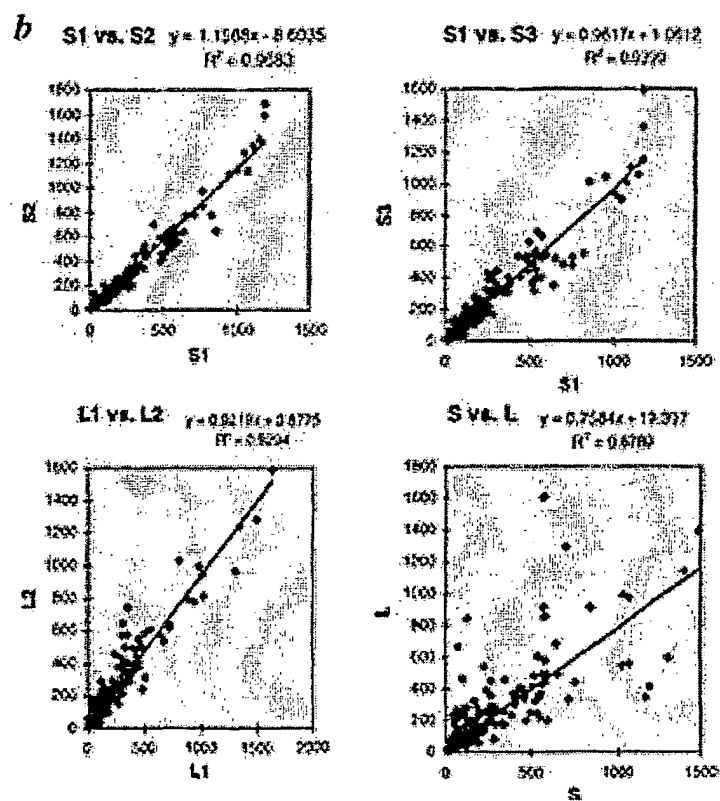
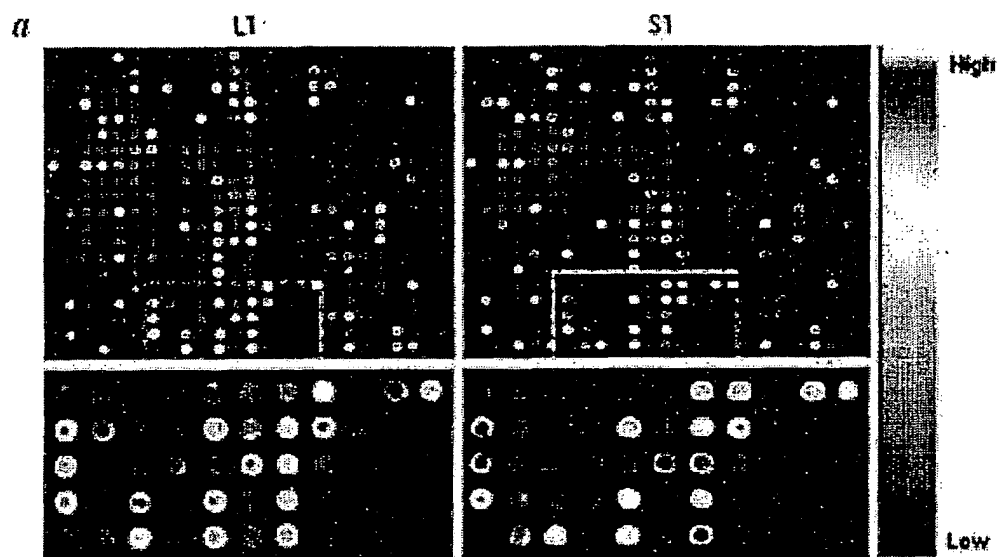


Figure 2

PRI ID	GB	Description	Mean±S.E.M. (Small)	Mean±S.E.M. (Large)	Ratio	p
192294	AF059030	<i>Rattus norvegicus</i> voltage-gated Na channel alpha subunit (NaN)	161.34±20.07	51.3±12.99*	3.15	0.0005
192195	D86642	Rat mRNA for FK506-binding protein	496.33±40.11	158.8±35.13	3.13	0.0005
192207	U16655	<i>Rattus norvegicus</i> phospholipase C delta-4	146.33±10.03	53.06±4.23	2.76	0.0005
192163	X90651	<i>Rattus norvegicus</i> P2X3 receptor	390.28±10.4	164.81±26.22	2.37	0.0005
191858	S69874	C-FABP: cutaneous fatty acid-binding protein (rat)	448.26±30.01	196.97±18.68	2.28	0.0005
192139	D45249	Rat proteasome activator rPA28 subunit alpha	104.46±5.24	47.74±6.97*	2.19	0.0005
192178	L12447	<i>Mus musculus</i> insulin-like growth factor binding protein 5	288.97±8.47	141.67±5.61	2.04	0.0005
192306	X77953	<i>Rattus norvegicus</i> ribosomal protein S15a.	415.77±54.08	204.19±25.03	2.04	0.005
192129	M38188	Human unknown protein from clone pHGR74	114.72±10.98	57.47±11.64*	2.00	0.0025
192339		Novel	83.94±6.26	42.42±7.75*	1.98	0.001
191857	L00111	Rat CGRP	900.1±45.83	459.99±35.39	1.96	0.0005
192203	AF059486	<i>Mus musculus</i> putative actin-binding protein DOC6	861.16±32.58	448.32±68.77	1.92	0.0005
192351	U25844	<i>Mus musculus</i> serine proteinase inhibitor (SPI3)	271.95±30.44	142.81±6.93	1.90	0.0025
191837	M29472	<i>Rattus norvegicus</i> mevalonate kinase	94.44±9.63	51.83±5.95*	1.82	0.0025
191628		Novel	635.92±73.01	363.86±11.53	1.75	0.005
192175		Novel	181.28±13.23	105.36±10.39	1.72	0.0005
192284		Novel	188.28±13	110.53±7.27	1.70	0.0005
192330	Y10386	MMC1INH <i>Mus musculus</i> C1 inhibitor	134.88±11.01	79.3±5.51	1.70	0.0005
192199	D42137	Rat annexin V gene	439.57±13.62	265.21±14.97	1.66	0.0005
192011	M98194	Rat extracellular signal-regulated kinase 1	319.35±32.79	194.88±6.83	1.64	0.005
192206	U59673	<i>Rattus norvegicus</i> 5HT3 receptor	139.96±4.07	85.48±6.17	1.64	0.0005
192167	U23146	<i>Rattus norvegicus</i> mitogenic regulation SseCKS	456.44±13.34	300.71±23.25	1.52	0.0005
191848	M93056	Human monocyte/neutrophil elastase inhibitor	125.16±14.76	82.56±15.38	1.52	0.05
192309		Novel	463.17±45.37	308.05±25.45	1.50	0.01

Figure 3

PRI ID	GB	Description	Mean±S.E.M. (Small)	Mean±S.E.M. (Large)	Ratio	p
192393	M25638	Rat smallest neurofilament protein (NF-L)	63.3±6.12	551.56±34.94	8.71	0.0005
191624	M14656	Rat osteopontin	53.4±4.11*	218.52±22.81	4.09	0.0005
192157	J04517	Rat high molecular weight neurofilament (NF-H)	475.86±18.59	1319.77±50.3	2.77	0.0005
192282	Z12152	<i>Rattus norvegicus</i> neurofilament protein middle	75.93±3.75	206.55±9.92	2.72	0.0005
192378	D87445	Human KIAA0256	30.26±2.66*	77.42±17.52	2.56	0.025
192283		Novel	50.9±3.45*	128.56±6.86	2.53	0.0005
192125	V00681	<i>Rattus norvegicus</i> mitochondrial genes for 16S rRNA, tRNA	186.5±14.61	445.82±23.95	2.39	0.0005
191851	X51396	Mouse MAP1B microtubule-associated protein	90.84±5.91	215.55±21.35	2.37	0.0025
192424	M91808	<i>Rattus norvegicus</i> sodium channel beta-1	83.99±7.93	194.88±20.61	2.32	0.0025
191862	S67755	hsp 27:heat shock protein 27 (Sprague-Dawley rats)	144.74±10.14	265.94±19.44	1.84	0.0005
192016	L10426	<i>Mus musculus</i> ets-related protein 81 (ER81)	43.85±1.89*	80.04±7.16	1.83	0.0025
192228		Novel	28.9±1.11*	52±3.41	1.80	0.0005
192411	M21551	Human neuromedin B	57.62±5.56*	97.18±6.61	1.69	0.0005
192422		Novel	110.06±11.78	168.52±12.14	1.53	0.0025

Figure 4

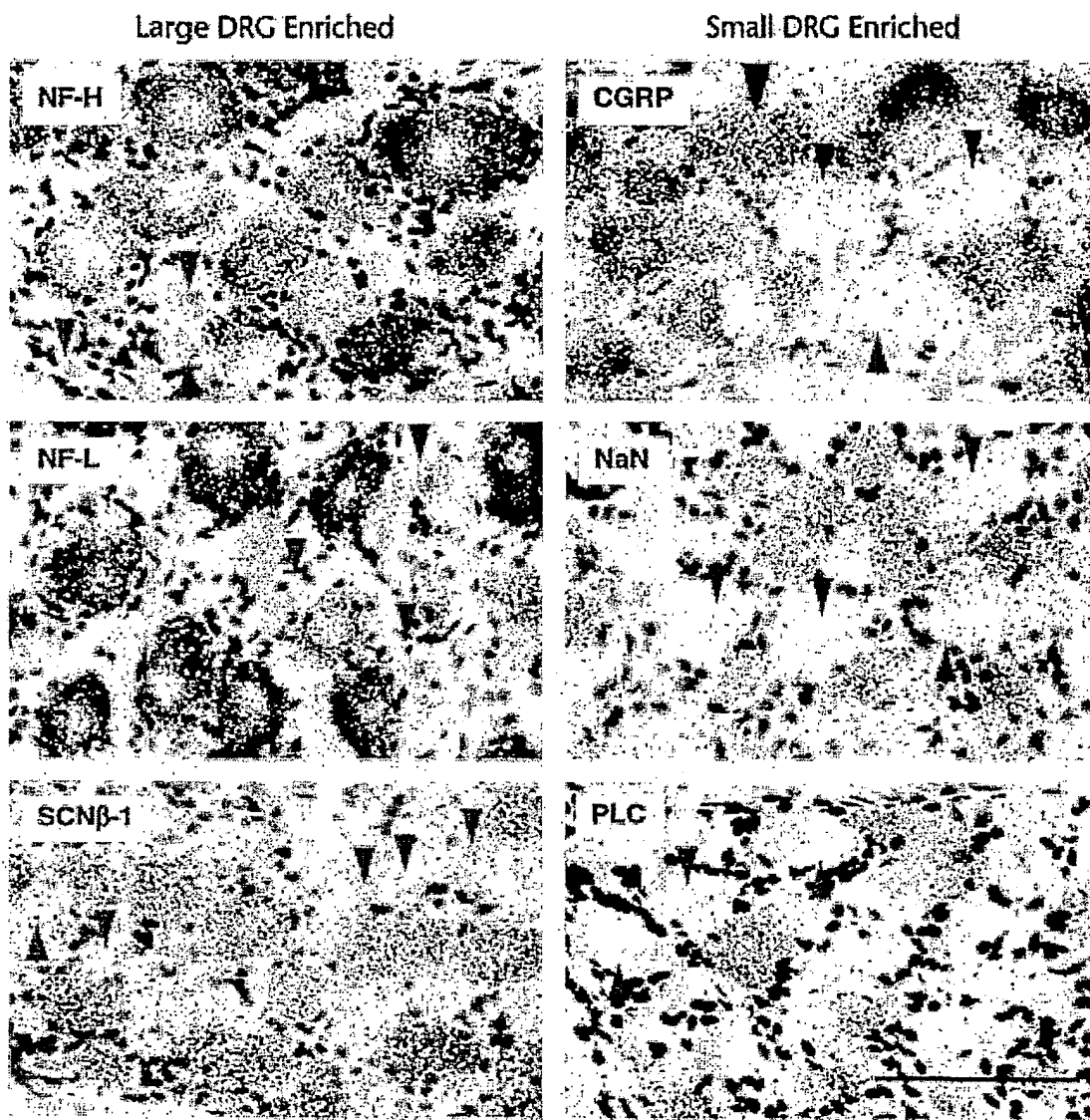


Figure 5

Clone ID	GB	Description	Small DRG		Large DRG	
			Intensity	% Labeled	Intensity	% Labeled
192393	M25638	Rat smallest neurofilament protein (NF-L)	±	100%	+++	100%
192157	J04517	Rat high molecular weight neurofilament (NF-H)	± / -	21.40%	+++	98.60%
192424	M91808	<i>Rattus norvegicus</i> sodium channel beta-1	± / -	10%	++	96.30%
192273	M13501	Rat liver fatty acid binding protein	+ / ++	62.20%	+ / -	1%
192294	AF059030	<i>Rattus norvegicus</i> voltage-gated Na channel (NaN)	++ / +	96.70%	+ / -	4.20%
192199	D42137	Rat annexin V gene	+ / ++	95.00%	+ / ++	74.00%
192207	U16655	<i>Rattus norvegicus</i> phospholipase C delta-4	++	42.20%	-	0%
191857	L00111	Rat CGRP	+++ / ++	83.70%	++ / -	9.40%

Figure 6

Vector	Primary Cell	Classification
1	Coronary artery endothelial	Endothelial
2	Umbilical artery endothelial	Endothelial
3	Umbilical vein endothelial	Endothelial
4	Aortic endothelial	Endothelial
5	Dermal microvascular endothelial	Endothelial
6	Pulmonary artery endothelial	Endothelial
7	Myometrium microvascular	Endothelial
8	Keratinocyte epidermal	Epithelial
9	Bronchial epithelial	Epithelial
10	Mammary epithelial	Epithelial
11	Prostate epithelial	Epithelial
12	Renal cortical epithelial	Epithelial
13	Renal proximal tubule epithelial	Epithelial
14	Small airway epithelial	Epithelial
15	Renal epithelial	Epithelial
16	Umbilical artery smooth muscle	Muscle
17	Neonatal dermal fibroblast	Muscle
18	Pulmonary artery smooth muscle	Muscle
19	Dermal fibroblast	Muscle
20	Neural progenitor cell	Muscle
21	Skeletal muscle	Muscle
22	Astrocyte	Muscle
23	Aortic smooth muscle	Muscle
24	Mesangial cell	Muscle
25	Coronary artery smooth muscle	Muscle
26	Bronchial smooth muscle	Muscle
27	Uterine smooth muscle	Muscle
28	Lung fibroblast	Muscle
29	Osteoblast	Muscle
30	Prostate stromal cell	Muscle

Figure 7

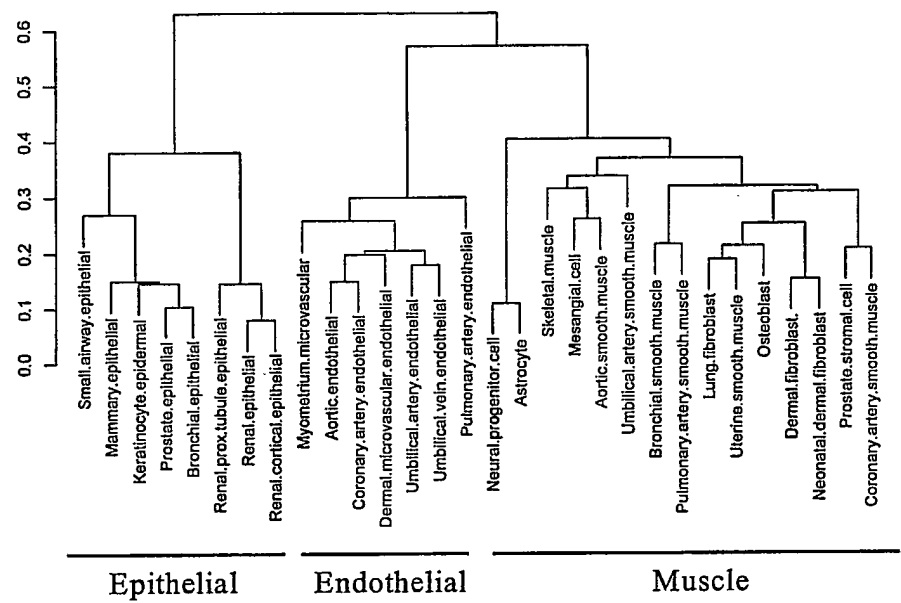


Figure 8

Primary Cell Gene Expression Profile

Seq Source	Accession	Endothelial Signature	Epithelial Signature	Muscle Signature	p-value	Source Description
GB	J03278	-0.41	-0.40	0.81	0.000011	Human platelet-derived growth factor (PDGF) receptor mRNA, complete cds
GB	U52165	0.68	-0.48	-0.20	0.000013	EST: AA150416 z105b02.s1 Soares_pregnant_uterus_NbHPU H
GB	W49672	-0.15	-0.19	0.34	0.000016	EST: Wingless-type MMTV integration site 5A, human homolog
INCYTE	3486371H1	0.19	0.48	-0.67	0.000016	EPIGN0T01 L24893 g529405 PO; myelin protein zero gb103prip 14 -1
GB	U16811	0.03	0.23	-0.26	0.000017	Human Bak mRNA, complete cds.
GB	K01918	0.57	-0.16	-0.42	0.000022	Human c-sis proto-oncogene for platelet-derived growth factor, exon 1 and flanks.
INCYTE	1227785H1	-0.32	1.07	-0.75	0.000023	AB000714 AB000714 Homo sapiens hRVP1 mRNA for RVP1, complete cds. Blastn P. 0.029
GB	AA293050	0.09	0.34	-0.42	0.000025	JNK ACTIVATING KINASE 1
GB	R09836	0.31	0.01	-0.32	0.000025	EST: Weakly similar to K04G11.4 [C.elegans]
GB	R06417	0.01	0.66	-0.68	0.000025	Junction plakoglobin
GB	AA243828	-0.17	-0.51	0.68	0.000027	H.sapiens mRNA for receptor protein tyrosine kinase
GB	M11749	-0.54	-0.50	1.04	0.000028	Human Thy-1 glycoprotein gene, complete cds.
INCYTE	1321982H1	0.50	-0.07	-0.43	0.000028	BLADNOT04 AF009225 g2327068 Human Ikb kinase alpha subunit (IKK alph gb104pri 90 -52
INCYTE	285478CA2	0.85	-0.40	-0.45	0.000028	EOSIHET02 g1296608 Human mRNA for chemokine CC-2 and CC-1. gb96pri 32 -74
INCYTE	547531H1	-0.03	0.36	-0.33	0.000028	U36445 Bos taurus calcium-activated chloride channel mRNA, complete cds
GB	AA521243	0.49	-0.36	-0.13	0.000029	PUTATIVE 60S RIBOSOMAL PROTEIN
GB	U46005	0.52	0.16	-0.68	0.000029	Human MDC15 mRNA, complete cds.
GB	Z74616	-0.71	-0.74	1.45	0.000030	H.sapiens mRNA for prepro-alpha2(I) collagen.
GB	H96850	0.38	0.26	-0.64	0.000031	Human mRNA for KIAA0115 gene, complete cds
INCYTE	2997284H1	0.38	0.50	-0.88	0.000033	OVARTUT07 D30785 g1648847 Mouse mRNA for neuropsin, complete cds. gb104rod 41 -24
GB	AA488073	0.02	0.41	-0.43	0.000035	Mucin 1, transmembrane

Figure 9a

Primary Cell Gene Expression Profile

Seq_Source	Accession	Muscle Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature			
GB	AA055193	0.12	0.32	-0.44	0.000035	EST: Weakly similar to No definition line found [C.elegans]
GB	X63368	-0.25	-0.08	0.32	0.000036	H.sapiens HSJ1 mRNA
GB	AA435938	-0.19	-0.16	0.35	0.000038	EST: zu01a08.s1 Soares_testis_NHT Homo sapiens cDNA clone 730550 3' similar to TR:G817957 G817957 GLYCINE
INCYTE	1726828F6	-0.07	-0.20	0.27	0.000038	EST: PROSNOT14
GB	X00663	-0.29	0.37	-0.08	0.000039	Human mRNA fragment for epidermal growth factor (EGF) receptor
GB	U09278	-0.30	-0.30	0.61	0.000039	Human fibroblast activation protein mRNA, complete cds.
GB	H40103	-0.20	-0.15	0.34	0.000039	EST: yn85c06.s1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone 175210 3', mRNA sequence
GB	L41147	-0.04	-0.07	0.12	0.000040	Homo sapiens 5-HT6 serotonin receptor mRNA, complete cds
GB	M32977	-0.52	0.51	0.01	0.000042	Human heparin-binding vascular endothelial growth factor (VEGF) mRNA, complete cds
INCYTE	3014785H1	-0.21	-0.21	0.42	0.000043	MUSCNOT07 M33210 g532591 Human colony stimulating factor 1 recept gb106pri 100 -71
INCYTE	4872203H1	-0.35	1.04	-0.69	0.000043	EST
INCYTE	3985758H1	0.42	0.09	-0.52	0.000044	EST
INCYTE	853668H1	-0.33	-0.12	0.45	0.000045	NGANNOT01 U78192 g1688304 Human Edg-2 receptor mRNA, complete cds. gb104pri 67 -35
GB	U96113	0.12	0.10	-0.22	0.000047	Homo sapiens Nedd-4-like ubiquitin-protein ligase WWP1 mRNA, partial cds.
GB	AA292676	0.17	0.31	-0.48	0.000048	Human metargidin precursor mRNA, complete cds
GB	H58873	-0.78	1.02	-0.24	0.000048	Human (HepG2) glucose transporter gene mRNA, complete cds
GB	X60957	1.46	-0.81	-0.65	0.000052	Human tie mRNA for putative receptor tyrosine kinase.
GB	AF023476	-0.19	-0.14	0.34	0.000052	Homo sapiens meltrin-L precursor (ADAM12) mRNA, complete cds.
GB	V00509	-0.22	-0.19	0.41	0.000053	Human gene for preproenkephalin
GB	AA452627	-0.20	-0.07	0.26	0.000053	Endothelin receptor type A

Figure 9b

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
GB	N95657	0.07	0.29	-0.35	0.000054	EST: Highly similar to HYPOTHETICAL 63.5 KD PROTEIN ZK353.1 IN CHROMOSOME III [Caenorhabditis elegans] EST
GB	U79666	0.20	0.06	-0.26	0.000060	Homo sapiens CD24 signal transducer mRNA, complete cds.
GB	M58664	-0.60	0.94	-0.34	0.000061	EST: Novel
GB	W87741	0.57	-0.17	-0.39	0.000063	AA477400 zu42a03.s1 Soares ovary tumor NbHOT Homo Vimentin
GB	M75165	-0.26	-0.80	1.06	0.000065	Human triiodothyronine (ear7) mRNA, complete cds.
GB	AA487812	0.52	-0.94	0.43	0.000065	L40459 MUSLTBP Mus musculus latent transforming growth factor-beta binding protein (LTBP-3) mRNA, complete cds.
GB	M24899	-0.02	-0.13	0.15	0.000066	PROSTUT10 M81784 g205039 Rat K+ channel mRNA, sequence. gb102rod 19 15
INCYTE	3415853H1	-0.25	-0.28	0.53	0.000067	HUMMARR Human mRNA for key subunit of the N-methyl-D-aspartate receptor, complete cds.
INCYTE	1690295F6	-0.11	-0.07	0.17	0.000074	Human mRNA for polypeptide 7B2.
GB	D13515	-0.06	-0.18	0.24	0.000077	Homo sapiens (clone HSNME29) CGRP type 1 receptor mRNA, complete cds
GB	Y00757	-0.15	-0.17	0.32	0.000083	TMLR3DT01 X83864 g1770395 Human EDG-3 gene. gb104pri 10 11
GB	L76380	0.48	-0.27	-0.20	0.000083	Human metalloproteinase inhibitor mRNA, complete cds.
INCYTE	290375H1	-0.35	-0.02	0.37	0.000087	Human amphiregulin (AR) mRNA, complete cds, clones lambda-AR1 and lambda-AR2.
GB	M32304	0.15	-0.64	0.49	0.000088	Human mRNA for steroid hormone receptor hERR1.
GB	M30704	-0.77	1.27	-0.50	0.000093	EST: BRAINOT03
GB	X51416	-0.03	0.22	-0.19	0.000101	Human tumor necrosis factor receptor mRNA, complete cds
INCYTE	530695T6	1.05	-0.51	-0.54	0.000103	BRAVXT02 AF001434 g2529706 Human Hpast (HPAST) mRNA, complete cds. gb106pri 37 -7
GB	M32315	0.42	-0.28	-0.14	0.000107	Human lysophosphatidic acid receptor homolog mRNA, complete cds
INCYTE	4504614H1	0.39	-0.07	-0.31	0.000108	
GB	U80811	-0.34	-0.04	0.38	0.000115	

Figure 9c

12/47

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial	Epithelial	Muscle		
GB	R93149	-0.19	0.04	0.14	0.000117	EST
GB	AA055101	0.35	-0.03	-0.32	0.000126	Homo sapiens NADH:ubiquinone oxidoreductase 18 kDa IP subunit mRNA, nuclear gene encoding mitochondrial protein, H.sapiens mRNA for transforming growth factor alpha
GB	X70340	-0.27	0.61	-0.34	0.000126	Human mRNA for ICAM-2, cell adhesion ligand for LFA-1.
GB	X15606	1.90	-0.91	-0.99	0.000126	UTRSNOT05 X92521 g1731985 Human mRNA for MMP-19 protein. gb104pri 100-48
INCYTE	1570946T6	-0.15	-0.15	0.30	0.000133	Homo sapiens (clone pAT 464) potential lymphokine/cytokine mRNA, complete cds
GB	M25315	-0.92	1.58	-0.66	0.000134	PROSNOT18 AF013598 g2352948 Rat proton gated cation channel DRASIC m gb103rod 30-11
INCYTE	1858095F6	-0.55	0.90	-0.35	0.000138	Homo sapiens CaM kinase II isoform mRNA, complete cds
GB	AA443177	-0.88	-0.83	1.71	0.000139	Human interleukin 11 mRNA, complete cds
GB	M57765	-0.09	-0.08	0.16	0.000140	Homo sapiens G protein-coupled receptor (GPR4) gene, complete cds.
GB	L36148	0.35	-0.17	-0.18	0.000141	Human class III alcohol dehydrogenase (ADH5) chi subunit mRNA, complete cds.
GB	M30471	-0.28	-0.08	0.36	0.000142	EST
GB	H25229	0.28	-0.21	-0.07	0.000142	Homo sapiens mRNA for ST2 protein
GB	D12763	0.95	-0.30	-0.66	0.000142	Homo sapiens mRNA for GABA-BR1a (hGB1a) receptor.
GB	Y11044	-0.08	-0.11	0.19	0.000145	Human collagenase type IV mRNA, 3' end.
GB	J03210	0.40	-1.24	0.84	0.000145	Human LTF mRNA for lactoferrin (lactotransferrin).
GB	X52941	-0.13	-0.11	0.24	0.000149	H.sapiens RON mRNA for tyrosine kinase.
GB	X70040	-0.20	0.42	-0.22	0.000149	Solute carrier family 9 (sodium/hydrogen exchanger), isoform 1 (antiporter, Na+/H+, amiloride sensitive)
GB	AA459197	-0.39	0.81	-0.43	0.000151	Human mRNA for KIAA0313 gene, complete cds
GB	AA488969	0.00	-0.57	0.57	0.000153	Human monocyte antigen CD14 (CD14) mRNA, complete cds.
GB	M86511	0.02	-0.49	0.46	0.000154	H.sapiens mRNA for E-cadherin
GB	H97778	-0.72	1.41	-0.69	0.000156	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor)
GB	AA058828	0.48	-0.28	-0.20	0.000157	

Figure 9d

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
INCYTE	938765H1	0.53	-0.33	-0.20	0.000161	CERVNOT01 J03004 g183181 Human guanine nucleotide-binding regulat gb103pri 50 -59
GB	N46975	-0.23	0.00	0.23	0.000161	EST
GB	X76180	-0.48	0.94	-0.46	0.000161	H.sapiens mRNA for lung amiloride sensitive Na+ channel protein
GB	AA004759	0.11	0.05	-0.15	0.000162	Homo sapiens dolichol monophosphate mannose synthase (DPM1) mRNA, partial cds
GB	X62421	-0.19	0.33	-0.15	0.000167	H.sapiens mRNA for DnaJ protein homologue
GB	U76833	-0.37	-0.33	0.69	0.000168	Human integral membrane serine protease Seprase mRNA, complete cds.
GB	U40992	0.63	-0.55	-0.07	0.000173	Human heat shock protein hsp40 homolog mRNA, complete cds
GB	H96738	-0.26	-0.50	0.76	0.000173	Cadherin 11 (OB-cadherin)
INCYTE	3437994H1	-0.20	-0.24	0.44	0.000173	PENCNOT05 Z66513 g1041336 F54D5.8 gb103eukp 34 -1
GB	M80436	-0.27	0.55	-0.28	0.000176	Human platelet activating factor recepto
GB	S82666	-0.50	0.95	-0.45	0.000176	EST: AA459401 zx89g01.s1 Soares ovary tumor NbHOT Homo
GB	AA453712	-0.51	-0.47	0.98	0.000181	Lumican
GB	AA234897	0.13	-0.19	0.06	0.000182	MADS box transcription enhancer factor 2, polypeptide C (myocyte enhancer factor 2C)
GB	R83000	-0.24	0.49	-0.26	0.000186	Basic transcription factor 3
GB	M14764	-0.35	0.77	-0.42	0.000186	Human nerve growth factor receptor mRNA, complete cds
GB	AA456585	-0.27	0.55	-0.28	0.000186	RecQ protein-like (DNA helicase Q1-like)
GB	M36089	-0.14	-0.46	0.61	0.000186	Human DNA-repair protein (XRCC1) mRNA, complete cds.
INCYTE	2313677H1	0.22	0.12	-0.34	0.000191	Human synapsin IIa (SYN2) mRNA, complete
GB	X03363	-0.21	0.23	-0.01	0.000193	Human c-erb-B-2 mRNA.
GB	U27109	1.50	-0.74	-0.76	0.000193	Human prepromulimerin mRNA, complete cds
GB	AA393950	-0.43	0.84	-0.41	0.000194	EST: z178a10.r1 Soares testis NHT Homo sapiens cDNA clone 728442 5' similar to gb:L29007_cds1 AMILORIDE-SENSITIVE SODIUM CHANNEL ALPHA-SUBUNIT (H1 IMAN)
GB	L03203	0.48	-0.94	0.45	0.000199	Human peripheral myelin protein 22 (GAS3) mRNA, complete cds.

Figure 9e

Primary Cell Gene Expression Profile

Seq Source	Accession	Muscle Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
INCYTE	2701503T6	-0.39	0.80	-0.41	0.000200	OVARTUT10 U20428 g1890631 Human SNC19 mRNA sequence. gb104pri 18 -36
	AA599173	-0.07	-0.52	0.59	0.000202	Human monocytic leukaemia zinc finger protein (MOZ) mRNA, complete cds
	AA464566	-0.22	-0.34	0.56	0.000207	Human mRNA for LDL-receptor related protein
	2135769H1	-0.35	0.59	-0.25	0.000212	ENDCNOT01 M14300 g183097 Human growth factor-inducible 2A9 gene, gb103pri 100 -88
GB	M88279	-0.05	0.40	-0.34	0.000213	Human immunophilin (FKBP52) mRNA, complete cds
	X15606	1.82	-0.96	-0.86	0.000215	Human mRNA for ICAM-2, cell adhesion ligand for LFA-1.
	AA429219	-0.17	0.37	-0.21	0.000223	EST: zv78h08.r1 Soares total fetus Nb2HF8 9w Homo sapiens cDNA clone 759807 5' similar to TR:G1136412
	AF083552	-0.29	0.34	-0.05	0.000224	EST: G1136412 KIAA1762 protein
INCYTE	2798465H1	-0.16	0.46	-0.30	0.000226	Homo sapiens canalicular multispecific organic anion transporter 2 (CMOAT2) mRNA, complete cds.
	AA478268	-0.17	0.32	-0.16	0.000228	NPOLNOT01 X04366 g29663 Human mRNA for calcium activated neutral gb103pri 98 -69
	AA282906	-0.71	0.54	0.17	0.000231	Human CIBP mRNA, complete cds
	R94659	-0.08	-0.16	0.25	0.000232	CD44 antigen (cell adhesion molecule) EST
GB	J05036	0.53	-0.62	0.09	0.000232	H94487 yv19e06.s1 Soares fetal liver spleen 1NFLS
	U97669	-0.33	-0.01	0.34	0.000235	Homo sapiens Notch3 (NOTCH3) mRNA, complete cds.
	J05392	-0.97	1.66	-0.70	0.000235	EST: AA074511 zm17e08.s1 Stratagene pancreas (#937208)
	U37791	-0.17	-0.18	0.35	0.000237	Homo sapiens clone rasi-1 matrix metalloproteinase RASI-1 mRNA, complete cds.
GB	M14058	-0.15	0.31	-0.17	0.000240	Human complement C1r mRNA, complete cds.
	W58658	0.23	-0.02	-0.21	0.000240	H.sapiens mRNA for CLPP
	M60315	1.09	-0.66	-0.44	0.000241	Human transforming growth factor-beta (tgf-beta) mRNA, complete cds.

Figure 9f

Primary Cell Gene Expression Profile

Seq Source	Accession	Muscle Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
GB	X51417	0.03	0.00	-0.03	0.000241	Human mRNA for steroid hormone receptor hERR2.
GB	L76191	-0.08	0.21	-0.14	0.000243	Homo sapiens interleukin-1 receptor-associated kinase (IRAK) mRNA, complete cds
GB	T98559	0.57	-0.50	-0.07	0.000246	Ribosomal protein L17
GB	R43734	0.77	-1.23	0.47	0.000248	Laminin, alpha 4
GB	T51895	0.42	-0.06	-0.35	0.000248	Hepatoma transmembrane kinase
GB	X04481	-0.07	-0.05	0.12	0.000253	Human mRNA for complement component C2
GB	AA486628	0.13	0.25	-0.38	0.000253	Early growth response protein 1
GB	AA495846	0.58	-0.59	0.01	0.000256	TRANSFORMING PROTEIN RHOB
GB	AA460679	0.07	-0.36	0.29	0.000257	Human mRNA for CMP-sialic acid transporter, complete cds
GB	H27933	-0.21	0.32	-0.11	0.000260	EST: y158e09.s1 Soares breast 3NbHBst Homo sapiens cDNA clone 162472 3' similar to gb:M64572 PROTEIN-TYROSINE PHOSPHATASE PTP-H1 (HUMAN); mRNA
GB	M57285	-0.14	-0.14	0.28	0.000264	Human coagulation factor X (F10) mRNA, complete cds
GB	U78180	-0.14	-0.04	0.18	0.000264	Human sodium channel 2 (hBNAc2) mRNA, alternatively spliced, complete cds
GB	AA455067	0.75	-0.29	-0.46	0.000265	Synuclein, alpha (non A4 component of amyloid precursor)
GB	J03258	-0.31	0.29	0.02	0.000268	Human vitamin D receptor mRNA, complete cds
GB	S56805	1.26	-0.61	-0.65	0.000268	Endothelin-1
GB	AA069517	-0.40	0.02	0.39	0.000269	Protein kinase convertase subtilisin/kexin type 2
GB	AA393856	0.21	0.04	-0.25	0.000269	Human putative transmembrane GTPase mRNA, partial cds
GB	AA146802	0.65	-0.32	-0.33	0.000277	H.sapiens mRNA for phosphate cyclase
GB	AA490721	-0.39	0.09	0.29	0.000277	Human splicing factor SRp30c mRNA, complete cds
GB	M19645	-0.17	-0.07	0.25	0.000280	Human 78 kDa glucose-regulated protein (GRP78) gene, complete cds.
GB	M97370	0.27	-0.16	-0.11	0.000281	Human adenosine receptor (A2) gene, complete cds.
GB	W01240	0.35	-0.34	-0.01	0.000281	Membrane protein, palmitoylated 1 (55kD)
GB	X00588	-0.24	0.29	-0.05	0.000281	Human mRNA for precursor of epidermal growth factor receptor
GB	X83864	-0.40	0.47	-0.07	0.000285	H.sapiens EDG-3 gene

Figure 9g

Primary Cell Gene Expression Profile

Seq Source	Accession	Muscle Signature			p-value	Epithelial Signature			Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		Endothelial Signature	Epithelial Signature	Muscle Signature	
GB	N66942	0.50	-0.29	-0.21	0.000289				H.sapiens mRNA for putative progesterone binding protein
GB	M31210	1.07	-0.59	-0.48	0.000289				Human endothelial differentiation protein (edg-1) gene mRNA, complete cds
INCYTE	3090747H1	-0.39	-0.05	0.44	0.000296				BRSTNOT19 X62841 g57648 Rat mRNA for potassium channel protein (gb102rod 27 -7
INCYTE	2027449H1	-0.92	1.79	-0.86	0.000296				KERANOT02 g179896 Human Can19 mRNA sequence. gb97pri 68 -76
GB	U83410	-0.16	-0.19	0.34	0.000301				Human CUL-2 (cul-2) mRNA, complete cds.
GB	X15606	1.78	-0.88	-0.90	0.000301				Human mRNA for ICAM-2, cell adhesion ligand for LFA-1.
GB	AA489275	-0.19	0.24	-0.05	0.000303				Human sodium/potassium-transporting ATPase beta-3 subunit mRNA, complete cds
GB	X61598	0.14	-0.64	0.49	0.000308				H.sapiens mRNA for collagen (a collagen-binding protein)
GB	N69574	0.04	-0.25	0.21	0.000308				EST
GB	T62627	1.36	-0.67	-0.69	0.000313				Human nuclear phosphoprotein mRNA, complete cds
INCYTE	2301338H1	-0.14	0.39	-0.25	0.000316				BRSTNOT05 X04366 g29663 Human mRNA for calcium activated neutral gb103pri 98 -7
GB	U76549	-0.92	1.50	-0.58	0.000322				Human cyokeratin 8 mRNA, complete cds.
GB	X02530	-0.39	0.37	0.01	0.000322				Human mRNA for gamma-interferon inducible early response gene (with homology to platelet proteins).
GB	AA411440	-0.28	0.62	-0.34	0.000328				Villin 2 (ezrin)
GB	AA487370	0.43	-0.07	-0.36	0.000332				Human myosin regulatory light chain mRNA, complete cds
GB	R96668	1.07	-0.54	-0.53	0.000336				H.sapiens mRNA for chemokine HCC-1
GB	X81120	0.87	-0.48	-0.38	0.000336				H.sapiens mRNA for central cannabinoid receptor
GB	X04882	-0.09	0.32	-0.24	0.000345				Human mRNA for dihydropteridine reductase (hDHPR).
GB	H94944	0.58	-0.23	-0.35	0.000346				EST: RAS-RELATED PROTEIN RAL-A
GB	AA490238	0.11	-0.35	0.23	0.000348				H.sapiens mitogen inducible gene mig-2, complete CDS
GB	L04510	-0.04	-0.05	0.09	0.000348				Human nucleotide binding protein mRNA, complete cds.
INCYTE	2510757F6	-0.09	0.24	-0.14	0.000349				EST: CONUTUT01 X95241 g1487972 I(2)tid gb103eukp 9 -6
GB	AA465593	-0.25	-0.12	0.37	0.000356				PROTEASOME COMPONENT C8
GB	AA284495	0.82	-0.44	-0.38	0.000356				Human mRNA for KIAA0081 gene, partial cds
GB	H57727	0.47	-0.21	-0.26	0.000356				EST: Highly similar to PTB-ASSOCIATED SPLICING FACTOR [Homo sapiens]

Figure 9h

17/47

Primary Cell Gene Expression Profile

Seq. Source	Accession	p-value			Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature	
GB	L36148	0.43	-0.22	-0.21	Homo sapiens G protein-coupled receptor (GPR4) gene, complete cds.
GB	AA393452	-0.14	0.31	-0.17	EST: zt71c01.r1 Soares testis NHT Homo sapiens cDNA clone 727776 5' similar to WP:D2045.8 CE00608 TNF-ALPHA INDUCED PROTEIN B12 ;
GB	M16768	0.25	0.00	-0.25	Human T-cell receptor gamma chain VJCI-CII-CIII region mRNA, complete cds.
GB	AA448667	0.09	0.27	-0.36	Human heterochromatin protein p25 mRNA, complete cds
GB	R65759	-0.13	-0.30	0.43	EST
GB	M69215	-0.79	0.48	0.31	Human hyaluronate receptor (CD44) gene, exon 1.
GB	U13666	-0.11	-0.16	0.27	Human G protein-coupled receptor (GPR1) gene, complete cds.
GB	U38545	0.23	-0.12	-0.10	Human ARF-activated phosphatidylcholine-specific phospholipase D1a (hPLD1) mRNA, complete cds
GB	H57180	0.15	-0.03	-0.11	Phospholipase C, gamma 2 (phosphatidylinositol-specific)
GB	M58552	0.11	-0.62	0.51	Human collagenase type IV (CLG4) gene, exon 1
GB	X92106	0.35	-0.10	-0.24	H.sapiens mRNA for bleomycin hydrolase.
GB	X56134	0.46	-0.86	0.41	Human mRNA for vimentin.
GB	N45139	-0.10	-0.01	0.11	EST
GB	R76770	-0.08	0.19	-0.11	EST
INCYTE	4727571H1	-0.26	0.61	-0.35	X99897 H.sapiens mRNA for P/Q-type calcium channel alpha1 subunit
GB	X54936	0.91	-0.41	-0.49	EST: AA130714 zo13h02.s1 Stratagene colon (#937204) Hom
GB	R22412	1.92	-1.03	-0.88	Platelet/endothelial cell adhesion molecule (CD31 antigen)
GB	M31210	0.82	-0.43	-0.39	Human endothelial differentiation protein (edg-1) gene mRNA, complete cds
GB	AF004327	0.86	-0.44	-0.42	EST: AA125872 z123d01.s1 Soares_pregnant_uterus_NbHPU H
GB	X04385	1.70	-0.86	-0.84	Human mRNA for pre-pro-von Willebrand factor.
GB	AA490462	-0.15	-0.04	0.19	Human mRNA for AEBP1 gene, complete cds
GB	AA448194	-0.11	-0.41	0.52	Human duplicate spinal muscular atrophy mRNA, clone 5G7, partial cds

Figure 9i

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
GB	M16405	0.25	-0.36	0.11	0.000421	Human m4 muscarinic acetylcholine receptor gene.
GB	W74565	0.19	-0.23	0.04	0.000422	EST: Weakly similar to contains similarity to C2H2-type zinc fingers [C.elegans]
GB	M80436	-0.21	0.37	-0.16	0.000427	Human platelet activating factor receptor
GB	X00351	-0.35	-0.09	0.43	0.000429	Human mRNA for beta-actin.
GB	AB000712	-0.23	0.44	-0.20	0.000441	EST: AA430665 zw26a07.s1 Soares ovary tumor NbHOT Homo
GB	AA284668	-0.78	0.97	-0.19	0.000446	Urokinase-type plasminogen activator
GB	R63295	-0.26	0.11	0.15	0.000447	EST
GB	S57551	0.23	-0.11	-0.12	0.000450	guanylate cyclase-coupled enterotoxin receptor [human, T84 colonic cell line, mRNA, 3787 nt].
GB	U66198	0.13	0.08	-0.22	0.000452	Human fibroblast growth factor homologous factor 2 (FHF-2) mRNA, complete cds.
GB	U07225	-0.09	0.24	-0.15	0.000453	Human P2U nucleotide receptor mRNA, complete cds
GB	L29401	-0.56	0.55	0.01	0.000459	Human low density lipoprotein receptor mRNA.
GB	R33755	-0.21	0.48	-0.27	0.000461	Glutathione-S-transferase pi-1
GB	AA428170	0.35	-0.42	0.08	0.000463	Dihydropyrimidine dehydrogenase
GB	M59911	-0.61	0.88	-0.27	0.000464	EST: AA424695 zv33a02.s1 Soares ovary tumor NbHOT Homo
INCYTE	g1967662	-0.54	0.05	0.49	0.000468	U73643 Human Chromosome 11 Cosmid
GB	M95167	0.03	0.01	-0.04	0.000471	cSRL34e5, complete sequence. Blastn P. 3.2E-21
GB	AA489699	1.22	-0.55	-0.67	0.000471	Homo sapiens dopamine transporter (SLC6A3) mRNA, complete cds.
GB	M86400	-0.10	0.43	-0.32	0.000485	Human COP9 homolog (HCOP9) mRNA, complete cds
GB	D83812	-0.09	-0.04	0.13	0.000492	Human phospholipase A2 mRNA, complete cds.
GB	M37435	-0.04	-0.21	0.25	0.000496	T80924 yd25g11.r1 Soares fetal liver spleen 1NFLS
INCYTE	1696122T6	-0.01	-0.15	0.15	0.000500	Human macrophage-specific colony-stimulating factor (CSF-1) mRNA, complete cds
GB	M17783	-1.14	0.53	0.61	0.000500	EST: COLNNOT23
GB	AA457119	0.43	0.10	-0.53	0.000506	EST: N59721 yv56c02.r1 Soares fetal liver spleen 1NFLS
						EST: AA457119 Homo sapiens cDNA clone IMAGE:810454 3', mRNA sequence

Figure 9j

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
GB	M20566	-0.11	0.24	-0.13	0.000506	Human interleukin 6 receptor mRNA, complete cds
GB	U83115	-0.16	0.52	-0.37	0.000506	Human non-lens beta gamma-crystallin like protein (AIM1) mRNA, partial cds.
GB	AA454743	-0.24	0.49	-0.25	0.000510	Human protease M mRNA, complete cds
GB	AA181500	1.19	-1.34	0.15	0.000510	Protein kinase, cAMP-dependent, regulatory, type II, beta
INCYTE	1742456R6	-0.24	0.17	0.07	0.000511	HIPONON01 M94055 g456678 Human voltage-gated sodium channel mRNA, gb103pri 100 -81
GB	AA456271	-0.04	0.19	-0.16	0.000514	Human Hlark mRNA, complete cds
INCYTE	3584702H1	-0.17	0.27	-0.10	0.000515	Mouse homer-1a mRNA, complete cds.
GB	H79888	0.37	-0.28	-0.09	0.000518	EST: Weakly similar to contactin associated protein [H.sapiens]
GB	X00187	-0.11	-0.11	0.22	0.000533	Human preproenkephalin A gene, 5' flanking region.
GB	AA486221	-0.16	-0.11	0.26	0.000542	Human inducible poly(A)-binding protein mRNA, complete cds
GB	H59758	-0.14	0.32	-0.18	0.000543	EST: Novel
GB	D10995	-0.04	0.00	0.04	0.000545	EST: AA909121 clone IMAGE:1542757 3' similar to 5-HYDROXYTRYPTAMINE 1B RECEPTOR
INCYTE	1452259F6	-0.26	0.53	-0.27	0.000569	EST: PENITUT01 D13626 g285995 KIAA0001 gb103pri 17 1
GB	AJ001015	-0.09	-0.12	0.21	0.000575	Homo sapiens mRNA encoding RAMP2.
INCYTE	2222054H1	-0.20	0.32	-0.12	0.000584	LUNGNOT18 U42975 g1150862 Rat Shal-related potassium channel Kv4.3 gb102rod 57 -44
GB	Z67743	-0.63	-0.07	0.70	0.000596	H.sapiens mRNA for CLC-7 chloride channel protein.
GB	L31409	-0.30	-0.03	0.33	0.000596	Homo sapiens creatine transporter mRNA, complete cds
GB	AA504617	0.44	-1.11	0.67	0.000597	Homo sapiens autoantigen p542 mRNA, 3' end of cds
GB	AA608557	-0.08	-0.13	0.21	0.000602	Damage-specific DNA binding protein 1 (127 kD)
INCYTE	928019R6	-0.05	-0.01	0.05	0.000608	BRAINOT04 X62840 g57652 Rat mRNA for potassium channel protein (gb102rod 16 -5
GB	M24748	-0.07	-0.09	0.16	0.000613	Human thyroid hormone receptor alpha 1 (TR-alpha-1) gene, complete cds.
GB	AA598978	-0.10	-0.14	0.24	0.000623	Filamin 1 (actin-binding protein-280)
GB	N59542	-0.64	0.08	0.56	0.000627	EST: Weakly similar to coded for by C. elegans cDNA CEESW58F [C.elegans]
GB	H68845	0.11	0.13	-0.24	0.000628	H.sapiens thiol-specific antioxidant protein mRNA

Figure 9k

20/47

Primary Cell Gene Expression Profile

Seq Source	Accession	Muscle Signature			p-value	Source Description		
		Endothelial Signature	Epithelial Signature	Muscle Signature				
GB	W68044	-0.17	0.25	-0.08	0.000633	EST: zd39f04.r1 Soares fetal heart NbHH19W Homo sapiens cDNA clone 343039 5'		
GB	AA487681	0.25	-0.31	0.06	0.000633	Human mRNA for ornithine decarboxylase antizyme, ORF 1 and ORF 2		
GB	H94163	0.20	-0.26	0.07	0.000636	ESTs		
GB	K03226	-0.74	0.84	-0.10	0.000638	Human preprourokinase mRNA, complete cds.		
GB	M18692	-0.18	0.16	0.02	0.000643	Human elastase III B mRNA, complete cds, clone pCL1E3		
GB	R92609	0.12	0.09	-0.21	0.000652	EST: Novel		
GB	T96731	-0.24	-0.14	0.39	0.000652	EST: Highly similar to HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DX BETA CHAIN PRECURSOR [Homo sapiens]		
INCYTE	1650566F6	-0.26	0.50	-0.25	0.000654	EST: GPCR_48_TL45 PROSTUT09 g285995 KIAA0001 gb99prip 30 -9		
GB	R98877	-0.04	-0.08	0.12	0.000658	ESTs		
GB	H94469	0.44	-0.25	-0.19	0.000661	EST: Weakly similar to T01G9.4 [C.elegans]		
INCYTE	1716001T6	0.40	-0.18	-0.22	0.000661	EST: UCMCNOT02		
GB	AA419164	0.43	-0.48	0.05	0.000663	RETINOIC ACID RECEPTOR BETA-2		
GB	AA457644	-0.02	-0.17	0.20	0.000664	EST: Human clone 23707 mRNA, partial cds		
GB	X63924	-0.06	-0.03	0.08	0.000665	H. sapiens CD18 exon 14.		
GB	R01272	-0.14	-0.06	0.20	0.000671	ESTs		
GB	M74782	0.35	-0.22	-0.12	0.000671	Human interleukin 3 receptor (hIL-3Ra) mRNA, complete cds		
INCYTE	2211526T6	-0.02	-0.10	0.13	0.000673	SINTFET03 AF026260 g2605715 Human vitamin D receptor (VDR) mRNA, com gb104pri 17 -10		
GB	AA452556	-0.05	-0.17	0.22	0.000686	H.sapiens mRNA for TRAMP protein		
GB	W47576	0.40	-0.37	-0.03	0.000688	ESTs		
GB	X07549	-0.42	0.80	-0.38	0.000697	Human mRNA for cathepsin H (E.C.3.4.22.16.).		
GB	U48730	0.09	-0.03	-0.06	0.000699	Human transcription factor Stat5b (stat5b) mRNA, complete cds.		
GB	T95693	-0.32	0.35	-0.03	0.000702	ESTs		
GB	L01639	0.72	-0.40	-0.32	0.000704	Human (clone HSY3RR) neuropeptide Y receptor (NPYR) mRNA, complete cds		
INCYTE	3248833H1	-0.20	-0.16	0.36	0.000711	Human mRNA encoding RAMP1.		

Figure 9I

Primary Cell Gene Expression Profile

Seq Source	Accession	p-value			Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature	
GB	R88734	0.58	-0.27	-0.31	EST
GB	AA504554	-0.07	-0.22	0.29	Human cytoskeleton associated protein (CG22) mRNA, complete cds
GB	U12512	-0.20	-0.09	0.28	Human bradykinin receptor B1 subtype mRNA, complete cds
GB	M11723	-0.09	0.18	-0.09	Human blood coagulation factor XII (Hageman factor) mRNA
INCYTE	2604309F6	-0.10	0.20	-0.10	LUNGTUT07 D30785 g1648847 Mouse mRNA for neuropsin, complete cds. gb104rod 30 -13
GB	S60489	0.39	0.39	-0.78	CD9=CD9 antigen mRNA.
GB	M59916	0.30	-0.47	0.17	Human acid sphingomyelinase (ASM) mRNA, complete cds.
GB	M11233	-0.52	-0.53	1.06	Human cathepsin D mRNA, complete cds.
GB	L01639	0.60	-0.43	-0.17	Human (clone HSY3RR) neuropeptide Y receptor (NPYR) mRNA, complete cds
GB	H25761	0.44	-0.16	-0.28	EST
GB	AA025156	-0.18	0.18	0.00	Growth Factor/ Receptor
GB	W74362	0.16	0.21	-0.37	EST
GB	X61800	-0.52	0.44	0.08	M.musculus mRNA for C/EBP delta
GB	N71365	-0.10	-0.18	0.28	EST
GB	AA454662	0.07	0.18	-0.25	Human mRNA for KIAA0020 gene, complete cds
GB	AA450180	0.01	0.26	-0.26	ZNF75
GB	N76338	0.26	-0.11	-0.14	EST: Highly similar to UNR PROTEIN [Cavia porcellus]
GB	U88880	0.40	-0.23	-0.16	Homo sapiens Toll-like receptor 4 (TLR4) mRNA, complete cds.
INCYTE	3269857F6	0.22	-0.24	0.02	X60007 NSGRP2MR N.sylvestris mRNA for glycine rich protein 2 (GRP2). Blastn P. 0.086
GB	M60626	-0.03	-0.05	0.08	Human N-formylpeptide receptor (fMLP-R98) mRNA, complete cds
INCYTE	1751294F6	-0.17	0.26	-0.09	EST: LIVRTUT01 AC002306 g2213635 R33799_1 gb103prip 46 -12
GB	M29871	0.57	-0.13	-0.45	Human ras-related C3 botulinum toxin substrate (rac) mRNA, complete cds
GB	M58603	-0.14	-0.14	0.28	Human nuclear factor kappa-B DNA binding subunit (NF-kappa-B) mRNA, complete cds.
GB	X12881	-0.11	1.11	-0.99	Human mRNA for cytokeratin 18.

Figure 9m

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
INCYTE	3118530H1	-0.03	0.27	-0.24	0.000863	EST: LUNGUT13 U95727 g2281450 Rat DnaJ homolog 2 mRNA, complete cds. gb103rod 33 -39
GB	M94054	-0.09	-0.35	0.44	0.000863	Human lysyl oxidase (LOX) mRNA, complete cds.
INCYTE	1519824H1	-0.10	0.33	-0.24	0.000864	EST
GB	X70070	-0.04	-0.02	0.07	0.000877	H.sapiens mRNA for neurotensin receptor
GB	X58454	-0.13	0.21	-0.08	0.000878	Human HD5DR gene for D5 dopamine receptor.
GB	M37435	-0.02	-0.20	0.22	0.000891	Human macrophage-specific colony-stimulating factor (CSF-1) mRNA, complete cds
GB	AA486275	0.15	0.07	-0.21	0.000892	LEUKOCYTE ELASTASE INHIBITOR
GB	M80800	0.37	-0.33	-0.05	0.000894	Pig gp145-trkC (trkC) mRNA, complete cds
INCYTE	1429303H1	-0.04	-0.10	0.15	0.000904	EST: SINTBST01
GB	U41163	-0.22	0.37	-0.14	0.000904	Human creatine transporter (SLC6A10) gene, partial cds.
INCYTE	449937H1	0.07	-0.18	0.11	0.000922	M57428 RATS6KIN3 Rat S6 kinase mRNA, complete cds. Blastn P. 0.00000002
GB	D13538	-0.06	-0.15	0.21	0.000923	Human alpha2CII-adrenergic receptor gene, complete cds.
GB	L12350	-0.41	-0.25	0.66	0.000941	Human thrombospondin 2 (THBS2) mRNA, complete cds.
GB	M11730	-0.28	0.18	0.10	0.000948	Human tyrosine kinase-type receptor (HER2) mRNA, complete cds.
GB	M54930	-0.06	-0.03	0.09	0.000951	Human vasoactive intestinal peptide and peptide histidine isoleucine mRNA, 3' end
GB	N76944	0.08	0.06	-0.13	0.000955	EST
GB	X02544	-0.06	-0.01	0.07	0.000961	EST: A700876 zj36c12.s1 Soares_fetal_liver_spleen_1NFLS
GB	AA451716	0.02	0.11	-0.14	0.000969	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (p105)
INCYTE	279279H1	-0.45	0.70	-0.25	0.000986	HumanacutephaseserumamyloidAprotei
GB	Y09479	-0.32	0.04	0.28	0.000987	H.sapiens mRNA for G protein-coupled receptor Edg-2
GB	H84982	-0.10	-0.06	0.15	0.000991	Human checkpoint suppressor 1 mRNA, complete cds
GB	AA443688	-0.18	-0.23	0.41	0.001004	GTP cyclohydrolase 1 (dopa-responsive dystonia) {alternative products}
GB	L33404	-0.15	0.33	-0.18	0.001008	Human stratum corneum chymotryptic enzyme mRNA, complete cds

Figure 9n

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
GB	H19264	0.02	0.08	-0.10	0.001014	EST: yn50c10.r1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone 171858 5' similar to SP:B41359 B41359 POTASSIUM CHANNEL PROTEIN SHAB11 - FRUIT FLY.; mRNA sequence.
GB	M85079	0.45	-0.18	-0.27	0.001032	Human TGF-beta type II receptor mRNA, complete cds
GB	AA598527	0.03	0.17	-0.21	0.001035	EST: Human BAC clone RG083M05 from 7q21-7q22
GB	AA286908	0.20	-0.41	0.21	0.001036	Myxovirus (influenza) resistance 2, homolog of murine BRAINOT14 S67803 g544589 excitatory amino acid receptor 1=glutama gb104pri 94 -48
INCYTE	1594625F6	-0.05	-0.15	0.20	0.001061	EST: Weakly similar to C35C5.3 [C.elegans]
GB	R78516	-0.28	0.28	0.00	0.001070	Carbonyl reductase
GB	AA280924	-0.13	-0.16	0.29	0.001095	Human neurotrophin-3 (NT-3) gene, complete cds.
GB	M37763	-0.10	-0.15	0.25	0.001119	Human Hou mRNA, complete cds
GB	AA279601	0.26	-0.27	0.00	0.001122	GPCR 101
GB	AC004126	-0.31	0.83	-0.52	0.001123	EST: AA434144 zw28b06.s1 Soares ovary tumor NbHOT Homo
GB	AB000714	-0.02	-0.25	0.26	0.001123	Human fibroblast growth factor homologous factor 3 (FHF-3) mRNA, complete cds.
GB	U66199	-0.05	0.13	-0.09	0.001156	Transcription elongation factor B (SIII), polypeptide 3 (110kD, elongin A)
GB	AA133129	0.53	-0.59	0.06	0.001163	EST: Novel
GB	N22980	0.36	-0.24	-0.12	0.001165	Human stanniocalcin precursor (STC) mRNA, complete cds
GB	AA085318	-0.24	-0.18	0.42	0.001165	EST: AA630328 ac08g12.s1 Stratagene HeLa cell s3 937216
GB	T61575	-0.53	0.21	0.33	0.001171	FIBRANT01 Z80147 g1657296 Human CACNL1A4 gene, exon 37. gb103pri 99 -35
INCYTE	150224T6	0.00	-0.06	0.06	0.001173	EST
GB	R23586	0.06	-0.16	0.10	0.001177	EST: L77606 HUM17QYCAH Homo sapiens (clone SEL277a) 17q YAC (303G8) RNA. Blastn P. 0.00000018
INCYTE	3384890H1	0.27	-0.13	-0.14	0.001178	EST: N74131 za75h01.s1 Soares_fetal_lung_NbHL19W Homo s
GB	L08044	0.19	-0.07	-0.12	0.001189	Human interleukin 1 receptor antagonist (IL1RN) gene, complete cds.
GB	M63099	-0.27	0.52	-0.25	0.001189	Inositol polyphosphate-1-phosphatase
GB	H52141	0.36	-0.11	-0.26	0.001195	

Figure 9o

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial	Epithelial	Muscle		
INCYTE	1652456H1	-0.02	0.04	-0.02	0.001214	PROSTUT08 U75329 g2507612 Human serine protease mRNA, complete cds gb104pri 92 -59
GB	M60828	-0.14	-0.17	0.31	0.001233	Human keratinocyte growth factor mRNA, complete cds.
GB	U39613	0.26	-0.13	-0.13	0.001242	Human cysteine protease ICE-LAP3 mRNA, complete cds.
GB	U59832	-0.31	0.06	0.25	0.001249	Human transcription factor, forkhead related activator 4 (FREAC-4) mRNA, complete cds.
GB	U62801	-0.24	0.47	-0.23	0.001255	EST: AA454743 zx77e01.s1 Soares ovary tumor NbHOT Homo
GB	H91337	-0.07	-0.09	0.17	0.001257	EST
GB	X54936	0.98	-0.47	-0.52	0.001264	EST: AA130714 zo13h02.s1 Stratagene colon (#937204) Hom
INCYTE	078114H1	-0.24	-0.08	0.32	0.001282	SYNORAB01 Y09479 g1679601 Human mRNA for G-protein-coupled recepto gb104pri 90 -70
GB	H38799	0.01	0.23	-0.23	0.001282	EST: Weakly similar to F59C6.4 [C.elegans]
GB	M38425	-0.18	0.25	-0.07	0.001285	Human EGF receptor (EGFR) gene, 5' end
GB	AA448755	0.07	-0.30	0.23	0.001303	M-PHASE INDUCER PHOSPHATASE 2
GB	T90375	-0.48	-0.01	0.49	0.001303	EST
INCYTE	2601724H1	-0.15	-0.23	0.38	0.001335	Human integrin beta-5 subunit mRNA, comp
INCYTE	g819904	-0.04	0.10	-0.06	0.001351	Z81585 CET05E12 Caenorhabditis elegans cosmid T05E12, complete sequence. Blastn P. 0.86
GB	M29870	0.04	0.17	-0.20	0.001387	Human ras-related C3 botulinum toxin substrate (rac) mRNA, complete cds
GB	D29990	0.11	-0.04	-0.07	0.001401	amino acid transporter E16
GB	R27082	0.01	-0.21	0.20	0.001403	EST
GB	R33030	-0.08	-0.04	0.11	0.001403	PROBABLE PROTEIN DISULFIDE ISOMERASE ER-60 PRECURSOR
INCYTE	1381683H1	0.05	-0.01	-0.04	0.001404	X14385 ALCRPEF Astasia longa chloroplast rps7 and tufa genes for ribosomal protein S7 and elongation factor Tu respectively. Blastn P. 0.00047
GB	R31521	-0.27	-0.04	0.30	0.001410	EST
GB	R91550	-0.14	-0.26	0.41	0.001424	Human arginine-rich protein (ARP) gene, complete cds
GB	M97016	-0.10	-0.01	0.11	0.001424	Homo sapiens osteogenic protein-2 (OP-2) mRNA, complete cds.

Figure 9p

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
GB	AA454652	-0.06	0.29	-0.23	0.001451	Human proteinase-activated receptor-2 mRNA, complete cds
GB	D55696	0.25	0.06	-0.31	0.001461	Human mRNA for cysteine protease, complete cds.
GB	M29366	-0.13	0.21	-0.08	0.001470	Human epidermal growth factor receptor (ERBB3) mRNA, complete cds.
GB	H98534	-0.23	0.27	-0.04	0.001471	Human small GTP binding protein Rab9 mRNA, complete cds
GB	M27492	-0.28	-0.37	0.65	0.001484	Human interleukin 1 receptor mRNA, complete cds
GB	AA424315	0.00	0.24	-0.24	0.001494	Human mRNA for proteasome subunit p42, complete cds
GB	D49728	0.11	0.09	-0.20	0.001501	Human NAK1 mRNA for DNA binding protein, complete cds.
GB	AA460727	-0.16	0.14	0.02	0.001512	Human mRNA for clathrin coat assembly protein-like, complete cds
GB	M93415	-0.04	-0.03	0.07	0.001584	Human activin type II receptor mRNA, complete cds.
INCYTE	157873H1	-0.05	-0.05	0.09	0.001593	THP1PLB02 D63785 g961439 Human mRNA for LD78 alpha beta, partial gb106pri 21 10
INCYTE	2116716T6	-0.01	-0.12	0.13	0.001594	BRSTTUT02 U67865 g1527201 CO6; putative potassium channel regulato gb102vrtp 10 8
GB	AA448929	0.04	-0.26	0.22	0.001594	Human clone pSK1 interferon gamma receptor accessory factor-1 (AF-1) mRNA, complete cds
INCYTE	637471CA2	-0.08	-0.12	0.20	0.001595	EST
GB	AA486626	0.37	-0.24	-0.12	0.001614	Poly(A)-binding protein-like 1
GB	L15189	-0.13	0.36	-0.23	0.001617	Homo sapiens mitochondrial HSP75 mRNA, complete cds
INCYTE	4161733H1	-0.02	0.07	-0.04	0.001635	Human apolipoprotein AI regulatory prote
GB	W60890	0.33	-0.43	0.10	0.001636	EST: Novel
GB	AA287196	-0.07	-0.25	0.32	0.001637	Human globin gene
GB	X95383	-0.42	-0.12	0.54	0.001652	O.cuniculus mRNA for alpha-B-crystallin
GB	U16953	0.02	-0.11	0.10	0.001669	Human potassium channel beta3 subunit mRNA, complete cds.
GB	M21571	-0.01	0.03	-0.03	0.001672	Human platelet-derived growth factor (PDGFA) A chain mRNA.
GB	W02116	-0.02	-0.13	0.14	0.001674	Human (H326) mRNA, complete cds
GB	M32977	-0.17	0.21	-0.04	0.001677	Human heparin-binding vascular endothelial growth factor (VEGF) mRNA, complete cds

Figure 9q

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial	Epithelial	Muscle		
GB	T97257	-0.05	-0.01	0.06	0.001713	EST
GB	W96114	0.23	-0.22	-0.01	0.001715	Human hnRNP H mRNA, complete cds
INCYTE	3105066H1	-0.18	0.24	-0.06	0.001715	EST: COLNUCT03 L05628 g1835659 MRP; multidrug resistance-associated pro gb103prip 31 -16
GB	AA486836	-0.11	0.21	-0.11	0.001718	EST: Weakly similar to product of alternative splicing [D.melanogaster]
GB	L24470	-0.10	-0.10	0.20	0.001723	Homo sapiens prostanoid FP receptor mRNA, complete cds
GB	AA443497	-0.14	-0.23	0.37	0.001731	Human clone 23732 mRNA, partial cds
GB	AA487526	0.60	-0.18	-0.42	0.001736	Receptor protein-tyrosine kinase EDDR1
GB	D12614	0.21	-0.10	-0.10	0.001752	Human mRNA for lymphotoxin (TNF-beta), complete cds.
INCYTE	1946704H1	-0.08	-0.06	0.14	0.001760	EST: PITUNOT01
GB	T61078	0.20	-0.11	-0.09	0.001763	Carbamoyl-phosphate synthetase 1, mitochondrial
GB	S40706	-0.29	0.06	0.23	0.001783	EST: AA015892 ze40c09.s1 Soares retina N2b4HR Homo sapi
GB	H25907	0.14	-0.06	-0.08	0.001799	EST
GB	H72027	0.14	-0.24	0.10	0.001799	GELSOLIN PRECURSOR, PLASMA
GB	Y00106	-0.15	0.39	-0.24	0.001813	Human gene for beta-adrenergic receptor (beta-2 subtype).
INCYTE	5547273H1	-0.01	0.05	-0.03	0.001813	EST:
GB	N90246	0.28	-0.07	-0.21	0.001813	EST: Novel
GB	H59203	0.07	0.21	-0.27	0.001814	Human Cdc6-related protein (HsCDC6) mRNA, complete cds
GB	L29384	0.08	-0.15	0.07	0.001816	Homo sapiens (clone pcDNA-alpha1E-1) voltage-dependent calcium channel alpha-1E-1 subunit mRNA, complete cds
GB	H84113	0.17	-0.19	0.02	0.001823	Retinal outer segment membrane protein 1
GB	AA477082	0.07	0.17	-0.24	0.001841	Homo sapiens brain and reproductive organ-expressed protein (BRE) gene, complete cds
GB	Z73903	-0.05	-0.12	0.16	0.001841	H.sapiens mRNA for TRPC1A
GB	H57941	-0.42	0.46	-0.04	0.001844	Human mRNA for KIAA0386 gene, complete cds
GB	M81882	-0.06	-0.01	0.07	0.001866	Human glutamate decarboxylase (GAD65) mRNA, complete cds
GB	AA401448	-0.26	0.14	0.12	0.001887	Human mRNA for KIAA0146 gene, partial cds

Figure 9r

Primary Cell Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
INCYTE	3358822T6	-0.28	-0.11	0.39	0.001973	Y12337 HSMDPKIN H.sapiens mRNA for myotonic dystrophy protein kinase like protein. Blastn P. 0.42
GB	N39161	0.44	0.26	-0.69	0.001974	CD36 antigen (collagen type I receptor, thrombospondin receptor)
GB	AA398883	-0.10	0.17	-0.08	0.001979	EST: Similar to gb:S66896 SQUAMOUS CELL CARCINOMA ANTIGEN (HUMAN);
GB	R64190	0.35	-0.13	-0.22	0.001985	Homo sapiens DNA-binding protein (CROC-1A) mRNA, complete cds
GB	T84762	-0.15	0.22	-0.06	0.001993	EST
GB	AA056148	-0.01	0.24	-0.23	0.001993	Human protein tyrosine kinase t-Ror1 (Ror1) mRNA, complete cds
GB	U43431	-0.03	-0.07	0.10	0.002024	EST: N21546 yx60a04.s1 Soares melanocyte 2NbHM Homo sap
GB	X14787	0.45	-0.30	-0.14	0.002039	EST: AA464630 zx85a05.r1 Soares ovary tumor NbHOT Homo
GB	M26685	-0.09	-0.06	0.16	0.002042	Human genomic DNA, 21q region, clone: PQ
GB	AJ001014	-0.22	-0.20	0.42	0.002051	Homo sapiens mRNA encoding RAMP1.
GB	S69200	-0.04	0.00	0.05	0.002066	EP3 prostanoid receptor isoform EP 3-II (alternatively spliced) [human, mRNA, 1682 nt]
GB	N90137	0.31	-0.43	0.11	0.002066	EST: Novel
GB	M21121	0.00	-0.05	0.06	0.002067	Human T cell-specific protein (RANTES) mRNA, complete cds.
GB	AA418689	0.59	-0.35	-0.24	0.002074	DNA-DIRECTED RNA POLYMERASE II 14.4 KD POLYPEPTIDE
GB	T87069	-0.18	0.04	0.14	0.002076	EST
GB	X15357	0.28	-0.11	-0.16	0.002093	Human mRNA for natriuretic peptide receptor (ANP-A receptor).
INCYTE	2194901H1	0.08	-0.06	-0.02	0.002103	THYRTUT03 M69013 g183690 Human guanine nucleotide-binding regulat gb104pri 50 -34
GB	N63635	0.20	0.13	-0.33	0.002116	EST: Novel
GB	D43950	0.08	0.25	-0.33	0.002158	Human mRNA for KIAA0098 gene, partial cds
GB	R25895	0.25	-0.40	0.15	0.002164	EST
GB	AA424743	0.19	-0.22	0.03	0.002173	H.sapiens ERF-1 mRNA 3' end
INCYTE	3097063H1	0.09	-0.02	-0.07	0.002174	U73193 HSU73193 Human inward rectifier potassium channel Kir1.2 (Kir1.2) mRNA, partial cds. Blastn P. 0.000000000000033

Figure 9s

Primary Cell Gene Expression Profile

Seq Source	Accession	Muscle Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
GB	L41351	-0.15	0.30	-0.15	0.002222	Homo sapiens prostatic mRNA, complete cds
INCYTE	903559H1	-0.24	0.39	-0.15	0.002238	EST: COLNNOT07
GB	M86849	-0.54	1.06	-0.52	0.002246	Human connexin 26 (GJB2) mRNA.
GB	M34539	0.40	-0.30	-0.10	0.002253	Human FK506-binding protein (FKBP) mRNA, complete cds
INCYTE	399998H1	-0.03	0.25	-0.22	0.002267	EST: PITUNOT02 g38479 Unknown. Possibly-related to neuroendocr gb97prip 10 -2
INCYTE	3320154H1	-0.03	-0.29	0.32	0.002287	Human imidazoline receptor antisera-sele
GB	H75632	0.02	0.13	-0.16	0.002305	EST
INCYTE	4875766H1	-0.02	0.04	-0.02	0.002306	calcium-activated chloride channel
GB	AA489331	0.08	-0.21	0.13	0.002308	Human dsRNA adenosine deaminase DRADA2b (DRADA2b) mRNA, complete cds
INCYTE	205581R6	-0.07	-0.05	0.12	0.002308	MPHGNOT02 M29696 g186365 Human interleukin-7 receptor (IL-7) mRNA gb106pri 16 -3
GB	T67104	0.19	-0.22	0.03	0.002325	EST: Weakly similar to No definition line found [C.elegans]
GB	R65792	-0.42	0.41	0.01	0.002350	EST: Weakly similar to similar to enoyl-CoA hydratases/isomerases [C.elegans]
GB	T90621	0.04	-0.12	0.08	0.002372	EST: Highly similar to 6.8 KD MITOCHONDRIAL PROTEOLIPID [Bos taurus]
GB	T94961	-0.02	-0.13	0.16	0.002394	Human stress responsive serine/threonine protein kinase Krs-2 mRNA, complete cds
GB	X87344	-0.06	-0.19	0.25	0.002405	EST: X87344.2 H.sapiens DMB mRNA.
GB	AA464067	-0.15	0.23	-0.08	0.002407	Human inositol 1,3,4-trisphosphate 5/6-kinase mRNA, complete cds
GB	AA291163	0.25	-0.37	0.12	0.002407	Glutaredoxin (thioltransferase)
INCYTE	2169635T6	0.04	-0.09	0.05	0.002411	ENDCNOT03 M77235 g184039 HH1; sodium channel alpha subunit gb103prip 99 -32
GB	Y00291	0.05	-0.12	0.07	0.002412	Human hap mRNA encoding a DNA-binding hormone receptor.
GB	AA455281	0.52	-0.28	-0.24	0.002413	EST: DEFENDER AGAINST CELL DEATH 1
INCYTE	3386845H1	0.18	-0.10	-0.08	0.002413	Apelin (ligand for APJ)
GB	N53024	-0.08	-0.05	0.14	0.002432	EST
GB	AA398230	-0.10	-0.11	0.21	0.002459	Human mRNA for KIAA0275 gene, complete cds
INCYTE	767295H1	0.12	0.10	-0.22	0.002475	LUNGNOT04 g205039 Rat K+ channel mRNA, sequence. gb97rod 13 16
GB	H21107	-0.06	-0.07	0.13	0.002475	Human mRNA for KIAA0164 gene, complete cds
GB	R70598	0.21	-0.06	-0.15	0.002476	EST: Weakly similar to ALU SUBFAMILY J [H.sapiens]
INCYTE	2210910T6	-0.34	-0.35	0.70	0.002492	EST: SINTFET03 Y08724 g1806030 BMP1-5 gb104prip 15 6

Figure 9t

Endothelial Gene Expression Profile

Seq Source	Accession	Endothelial Signature	Epithelial Signature	Muscle Signature	p-value	Source Description
GB	X15606	1.90	-0.91	-0.99	0.000126	Human mRNA for ICAM-2, cell adhesion ligand for LFA-1.
GB	R22412	1.92	-1.03	-0.88	0.000401	Platelet/endothelial cell adhesion molecule (CD31 antigen)
GB	X15606	1.82	-0.96	-0.86	0.000215	Human mRNA for ICAM-2, cell adhesion ligand for LFA-1.
GB	X15606	1.78	-0.88	-0.90	0.000301	Human mRNA for ICAM-2, cell adhesion ligand for LFA-1.
GB	X04385	1.70	-0.86	-0.84	0.000412	Human mRNA for pre-pro-von Willebrand factor.
GB	U27109	1.50	-0.74	-0.76	0.000193	Human preprothrombin mRNA, complete cds
GB	G60957	1.46	-0.81	-0.65	0.000052	Human tie mRNA for putative receptor tyrosine kinase.
GB	T62627	1.36	-0.67	-0.69	0.000313	Human nuclear phosphoprotein mRNA, complete cds
GB	S56805	1.26	-0.61	-0.65	0.000268	Endothelin-1
GB	AA489699	1.22	-0.55	-0.67	0.000471	Human COP9 homolog (HCOP9) mRNA, complete cds
GB	R96668	1.07	-0.54	-0.53	0.000336	H.sapiens mRNA for chemokine HCC-1
GB	530695T6	1.05	-0.51	-0.54	0.000103	EST: BRAINOT03
GB	M31210	1.07	-0.59	-0.48	0.000289	Human endothelial differentiation protein (edg-1) gene mRNA, complete cds
GB	M60315	1.09	-0.66	-0.44	0.000241	Human transforming growth factor-beta (tgf-beta) mRNA, complete cds.
GB	X54936	0.98	-0.47	-0.52	0.001264	EST: AA130714 zo13h02.s1 Stratagene colon (#937204) Hom
GB	X54936	0.91	-0.41	-0.49	0.000400	EST: AA130714 zo13h02.s1 Stratagene colon (#937204) Hom
GB	AF004327	0.86	-0.44	-0.42	0.000406	EST: AA125872 z123d01.s1 Soares_pregnant_uterus_NbHPU H
GB	285478CA2	0.85	-0.40	-0.45	0.000028	EOSIHE02 g1296608 Human mRNA for chemokine CC-2 and CC-1. gb96pri 32 -74
GB	D12763	0.95	-0.30	-0.66	0.000142	Homo sapiens mRNA for ST2 protein
GB	X81120	0.87	-0.48	-0.38	0.000336	H.sapiens mRNA for central cannabinoid receptor
GB	M31210	0.82	-0.43	-0.39	0.000405	Human endothelial differentiation protein (edg-1) gene mRNA, complete cds
GB	AA284495	0.82	-0.44	-0.38	0.000356	Human mRNA for KIAA0081 gene, partial cds
GB	AA181500	1.19	-1.34	0.15	0.000510	Protein kinase, cAMP-dependent, regulatory, type II, beta
GB	AA455067	0.75	-0.29	-0.46	0.000265	Synuclein, alpha (non A4 component of amyloid precursor)

Figure 10a

Endothelial Gene Expression Profile

Seq Source	Accession	Endothelial Signature	Epithelial Signature	Muscle Signature	p-value	Source Description
GB	L01639	0.72	-0.40	-0.32	0.000704	Human (clone HSY3RR) neuropeptide Y receptor (NPYR) mRNA, complete cds
GB	AA146802	0.65	-0.32	-0.33	0.000277	H.sapiens mRNA for phosphate cyclase
GB	U52165	0.68	-0.48	-0.20	0.000013	EST: AA150416 z105b02.s1 Soares_pregnant_uterus_NbHPU H
GB	R88734	0.58	-0.27	-0.31	0.000717	EST
GB	AA418689	0.59	-0.35	-0.24	0.002074	DNA-DIRECTED RNA POLYMERASE II 14.4 KD POLYPEPTIDE
GB	H94944	0.58	-0.23	-0.35	0.000346	RAS-RELATED PROTEIN RAL-A
GB	L01639	0.60	-0.43	-0.17	0.000750	Human (clone HSY3RR) neuropeptide Y receptor (NPYR) mRNA, complete cds
GB	AA487526	0.60	-0.18	-0.42	0.001736	Receptor protein-tyrosine kinase EDDR1
GB	AA455281	0.52	-0.28	-0.24	0.002413	EST: DEFENDER AGAINST CELL DEATH 1
GB	W87741	0.57	-0.17	-0.39	0.000063	EST: Novel
GB	K01918	0.57	-0.16	-0.42	0.000022	Human c-sis proto-oncogene for platelet-derived growth factor, exon 1 and flanks.
INCYTE	938765H1	0.53	-0.33	-0.20	0.000161	CERVNOT01 J03004 g183181 Human guanine nucleotide-binding regulat gb103pri 50 -59
GB	N66942	0.50	-0.29	-0.21	0.000289	H.sapiens mRNA for putative progesterone binding protein
GB	U40992	0.63	-0.55	-0.07	0.000173	Human heat shock protein hsp40 homolog mRNA, complete cds
GB	M29871	0.57	-0.13	-0.45	0.000851	Human ras-related C3 botulinum toxin substrate (rac) mRNA, complete cds
GB	AA058828	0.48	-0.28	-0.20	0.000157	Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor)
GB	L76380	0.48	-0.27	-0.20	0.000083	Homo sapiens (clone HSNME29) CGRP type 1 receptor mRNA, complete cds
GB	H57727	0.47	-0.21	-0.26	0.000356	EST: Highly similar to PTB-ASSOCIATED SPLICING FACTOR [Homo sapiens]
GB	T98559	0.57	-0.50	-0.07	0.000246	Ribosomal protein L17
GB	L36148	0.43	-0.22	-0.21	0.000356	Homo sapiens G protein-coupled receptor (GPR4) gene, complete cds.

Figure 10b

Endothelial Gene Expression Profile

Seq Source	Accession	Endothelial Signature			Epithelial Signature			p-value	Source Description
		0.45	-0.18	-0.27	0.44	-0.25	-0.19		
GB	M85079	0.44	-0.25	-0.19	0.49	-0.36	-0.13	0.001032	Human TGF-beta type II receptor mRNA, complete cds
GB	H94469	0.49	-0.36	-0.13	0.45	-0.30	-0.14	0.000661	EST: Weakly similar to T01G9.4 [C.elegans]
GB	AA521243	0.45	-0.30	-0.14	0.50	-0.07	-0.43	0.000029	PUTATIVE 60S RIBOSOMAL PROTEIN
GB	X14787	0.40	-0.18	-0.22	0.40	-0.23	-0.16	0.002039	EST: AA464630 zx85a05.r1 Soares ovary tumor NbHOT Homo
INCYTE	1321982H1	0.58	-0.59	0.01	0.42	-0.28	-0.14	0.000028	BLADNOT04 AF009225 g2327068 Human Ikb kinase alpha subunit (IKK alpha gb104pri 90 -52
INCYTE	1716001T6	0.40	-0.18	-0.22	0.40	-0.23	-0.16	0.000661	EST: UCMCNOT02
GB	AA495846	0.40	-0.23	-0.16	0.42	-0.28	-0.14	0.000256	TRANSFORMING PROTEIN RHOB
GB	U88880	0.42	-0.28	-0.14	0.35	-0.17	-0.18	0.000837	Homo sapiens Toll-like receptor 4 (TLR4) mRNA, complete cds.
GB	M32315	0.35	-0.17	-0.18	0.40	-0.30	-0.10	0.000107	Human tumor necrosis factor receptor mRNA, complete cds
GB	L36148	0.40	-0.30	-0.10	0.40	-0.30	-0.10	0.000141	Homo sapiens G protein-coupled receptor (GPR4) gene, complete cds.
GB	M34539							0.002253	Human FK506-binding protein (FKBP) mRNA, complete cds

Figure 10c

Epithelial Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
INCYTE	2027449H1	-0.92	1.79	-0.86	0.000296	KERANOT02 g179896 Human Can19 mRNA sequence. gb97pri 68 -76
GB	J05392	-0.97	1.66	-0.70	0.000235	EST: AA074511 zm17e08.s1 Stratagene pancreas (#937208)
GB	M25315	-0.92	1.58	-0.66	0.000134	Homo sapiens (clone pAT 464) potential lymphokine/cytokine mRNA, complete cds
GB	H97778	-0.72	1.41	-0.69	0.000156	H.sapiens mRNA for E-cadherin
GB	U76549	-0.92	1.50	-0.58	0.000322	Human cytokeratin 8 mRNA, complete cds.
GB	M30704	-0.77	1.27	-0.50	0.000093	Human amphiregulin (AFR) mRNA, complete cds, clones lambda-AR1 and lambda-AR2.
GB	M86849	-0.54	1.06	-0.52	0.002246	Human connexin 26 (GJB2) mRNA.
GB	S82666	-0.50	0.95	-0.45	0.000176	EST: AA459401 zx89g01.s1 Soares ovary tumor NbHOT Homo
GB	X76180	-0.48	0.94	-0.46	0.000161	H.sapiens mRNA for lung amiloride sensitive Na+ channel protein
INCYTE	1227785H1	-0.32	1.07	-0.75	0.000023	AB000714 AB000714 Homo sapiens hRVP1 mRNA for RVP1, complete cds. Blastn P. 0.029
INCYTE	4872203H1	-0.35	1.04	-0.69	0.000043	EST
GB	M58664	-0.60	0.94	-0.34	0.000061	Homo sapiens CD24 signal transducer mRNA, complete cds.
GB	H58873	-0.78	1.02	-0.24	0.000048	Human (HepG2) glucose transporter gene mRNA, complete cds
INCYTE	1858095F6	-0.55	0.90	-0.35	0.000138	PROSNOT18 AF013598 g2352948 Rat proton gated cation channel DRASIC m gb103rod 30 -11
GB	AA393950	-0.43	0.84	-0.41	0.000194	EST: zt78a10.r1 Soares testis NHT Homo sapiens cDNA clone 728442 5' similar to gb:L29007_cds1 AMILORIDE-SENSITIVE SODIUM CHANNEL ALPHA-SUBUNIT
GB	X12881	-0.11	1.11	-0.99	0.000863	Human mRNA for cytokeratin 18.
GB	AA459197	-0.39	0.81	-0.43	0.000151	Solute carrier family 9 (sodium/hydrogen exchanger), isoform 1 (antiporter, Na+/H+, amiloride sensitive)
INCYTE	2701503T6	-0.39	0.80	-0.41	0.000200	OVARTUT10 U20428 g1890631 Human SNC19 mRNA sequence. gb104pri 18 -36

Figure11a

Epithelial Gene Expression Profile

Seq Source	Accession	Endothelial Signatu	Epithelial Signature	Muscle Signature	p-value	Source Description
GB	X07549	-0.42	0.80	-0.38	0.000697	Human mRNA for cathepsin H (E.C.3.4.22.16.).
GB	AA284668	-0.78	0.97	-0.19	0.000446	Urokinase-type plasminogen activator
GB	M59911	-0.61	0.88	-0.27	0.000464	EST: AA424695 zv33a02.s1 Soares ovary tumor NbHOT Homo
GB	AC004126	-0.31	0.83	-0.52	0.001123	GPCR 101
GB	M14764	-0.35	0.77	-0.42	0.000186	Human nerve growth factor receptor mRNA, complete cds
INCYTE	279279H1	-0.45	0.70	-0.25	0.000986	Human acute phase serum myloid Apratei
GB	K03226	-0.74	0.84	-0.10	0.000638	Human preproreninase mRNA, complete cds.
GB	AA411440	-0.28	0.62	-0.34	0.000328	Villin 2 (ezrin)
GB	X70340	-0.27	0.61	-0.34	0.000126	H.sapiens mRNA for transforming growth factor alpha
INCYTE	4727571H1	-0.26	0.61	-0.35	0.000399	X99897 H.sapiens mRNA for P/Q-type calcium channel alpha1 subunit
INCYTE	2135769H1	-0.35	0.59	-0.25	0.000212	ENDCNOT01 M14300 g183097 Human growth factor-inducible 2A9 gene, gb103pri 100 -88
GB	M80436	-0.27	0.55	-0.28	0.000176	Human platelet activating factor recepto
GB	AA456585	-0.27	0.55	-0.28	0.000186	RecQ protein-like (DNA helicase Q1-like)
INCYTE	1452259F6	-0.26	0.53	-0.27	0.000569	EST: PENITUT01 D13626 g285995 KIAA0001 gb103pri 17 1
GB	M63099	-0.27	0.52	-0.25	0.001189	Human interleukin 1 receptor antagonist (IL1RN) gene, complete cds.
INCYTE	1650566F6	-0.26	0.50	-0.25	0.000654	EST: GPCR_48_TL45 PROSTUT09 g285995 KIAA0001 gb99pri 30 -9
GB	AA454743	-0.24	0.49	-0.25	0.000510	Human protease M mRNA, complete cds
GB	R83000	-0.24	0.49	-0.26	0.000186	Basic transcription factor 3
GB	U62801	-0.24	0.47	-0.23	0.001255	EST: AA454743 zx77e01.s1 Soares ovary tumor NbHOT Homo
GB	R33755	-0.21	0.48	-0.27	0.000461	Glutathione-S-transferase pi-1
GB	U83115	-0.16	0.52	-0.37	0.000506	Human non-lens beta gamma-crystallin like protein (AIM1) mRNA, partial cds.
GB	R06417	0.01	0.66	-0.68	0.000025	Junction plakoglobin
GB	AB000712	-0.23	0.44	-0.20	0.000441	EST: AA430665 zw26a07.s1 Soares ovary tumor NbHOT Homo

Figure11b

Epithelial Gene Expression Profile

Seq Source	Accession	Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
INCYTE	2798465H1	-0.16	0.46	-0.30	0.000226	NPOLNOT01 X04366 g29663 Human mRNA for calcium activated neutral gb103pri 98 -69
GB	X70040	-0.20	0.42	-0.22	0.000149	H.sapiens RON mRNA for tyrosine kinase.
GB	X83864	-0.40	0.47	-0.07	0.000285	H.sapiens EDG-3 gene
GB	L29401	-0.56	0.55	0.01	0.000459	Human low density lipoprotein receptor mRNA.
GB	Y00106	-0.15	0.39	-0.24	0.001813	Human gene for beta-adrenergic receptor (beta-2 subtype). EST: zv78h08.r1 Soares total fetus Nb2HF8 9w Homo sapiens cDNA clone 759807 5' similar to TR:G1136412 G1136412 KIAA0176 PROTEIN ;
GB	AA429219	-0.17	0.37	-0.21	0.000223	EST: COLNNOT07
INCYTE	903559H1	-0.24	0.39	-0.15	0.002238	Human phospholipase A2 mRNA, complete cds.
GB	M86400	-0.10	0.43	-0.32	0.000485	Human platelet activating factor recepto
GB	M80436	-0.21	0.37	-0.16	0.000427	BRSTNOT05 X04366 g29663 Human mRNA for calcium activated neutral gb103pri 98 -7
INCYTE	2301338H1	-0.14	0.39	-0.25	0.000316	Human creatine transporter (SLC6A10) gene, partial cds.
GB	U41163	-0.22	0.37	-0.14	0.000904	

Figure 11c

Muscle Gene Expression Profile

Seq Source	Accession	Endothelial Signature	Epithelial Signature	Muscle Signature	p-value	Source Description
GB	AA443177	-0.88	-0.83	1.71	0.000139	Homo sapiens CaM kinase II isoform mRNA, complete cds
GB	Z74616	-0.71	-0.74	1.45	0.000030	H.sapiens mRNA for prepro-alpha2(I) collagen.
GB	M11233	-0.52	-0.53	1.06	0.000745	Human cathepsin D mRNA, complete cds.
GB	M11749	-0.54	-0.50	1.04	0.000028	Human Thy-1 glycoprotein gene, complete cds.
GB	AA453712	-0.51	-0.47	0.98	0.000181	Lumican
GB	M75165	-0.26	-0.80	1.06	0.000065	EST: AA477400 zu42a03.s1 Soares ovary tumor NbHOT Homo
GB	J03278	-0.41	-0.40	0.81	0.000011	Human platelet-derived growth factor (PDGF) receptor mRNA, complete cds
INCYTE	2210910T6	-0.34	-0.35	0.70	0.002492	EST: SINTFET03 Y08724 g1806030 BMP1-5 gb104prip 15 6
GB	H96738	-0.26	-0.50	0.76	0.000173	Cadherin 11 (OB-cadherin)
GB	U76833	-0.37	-0.33	0.69	0.000168	Human integral membrane serine protease Seprase mRNA, complete cds.
GB	M27492	-0.28	-0.37	0.65	0.001484	Human interleukin 1 receptor mRNA, complete cds
GB	L12350	-0.41	-0.25	0.66	0.000941	Human thrombospondin 2 (THBS2) mRNA, complete cds.
GB	U09278	-0.30	-0.30	0.61	0.000039	Human fibroblast activation protein mRNA, complete cds.
GB	AA243828	-0.17	-0.51	0.68	0.000027	H.sapiens mRNA for receptor protein tyrosine kinase
GB	AA464566	-0.22	-0.34	0.56	0.000207	Human mRNA for LDL-receptor related protein
INCYTE	3415853H1	-0.25	-0.28	0.53	0.000067	L40459 MUSLTBP Mus musculus latent transforming growth factor-beta binding protein (LTBP-3) mRNA, complete cds.
GB	Z67743	-0.63	-0.07	0.70	0.000596	Blastn P. 1E-57
GB	M36089	-0.14	-0.46	0.61	0.000186	H.sapiens mRNA for CLC-7 chloride channel protein.
GB	X95383	-0.42	-0.12	0.54	0.001652	Human DNA-repair protein (XRCC1) mRNA, complete cds.
GB	AA599173	-0.07	-0.52	0.59	0.000202	O.cuniculus mRNA for alpha-B-crystallin
INCYTE	3437994H1	-0.20	-0.24	0.44	0.000173	Human monocytic leukaemia zinc finger protein (MOZ) mRNA, complete cds
GB	AA448194	-0.11	-0.41	0.52	0.000420	EST: PENCNOT05 Z66513 g1041336 F54D5.8 gb103eukp 34 -1
INCYTE	3014785H1	-0.21	-0.21	0.42	0.000043	Human duplicate spinal muscular atrophy mRNA, clone 5G7, partial cds MUSCNOT07 M33210 g532591 Human colony stimulating factor 1 recept gb106pri 100 -71

Figure 12a

Muscle Gene Expression Profile

Seq Source	Accession	Muscle Signature			p-value	Source Description
		Endothelial Signature	Epithelial Signature	Muscle Signature		
GB	AJ001014	-0.22	-0.20	0.42	0.002051	Homo sapiens mRNA encoding RAMP1.
GB	AA085318	-0.24	-0.18	0.42	0.001165	Human stanniocalcin precursor (STC) mRNA, complete cds
GB	V00509	-0.22	-0.19	0.41	0.000053	Human gene for preproenkephalin
GB	AA443688	-0.18	-0.23	0.41	0.001004	GTP cyclohydrolase 1 (dopa-responsive dystonia) {alternative products}
INCYTE	853668H1	-0.33	-0.12	0.45	0.000045	NGANOT01 U78192 g1688304 Human Edg-2 receptor mRNA, complete cds. gb104pri 67 -35
GB	AA488969	0.00	-0.57	0.57	0.000153	Human mRNA for KIAA0313 gene, complete cds
GB	R65759	-0.13	-0.30	0.43	0.000368	EST
GB	R91550	-0.14	-0.26	0.41	0.001424	Human arginine-rich protein (ARP) gene, complete cds
INCYTE	2601724H1	-0.15	-0.23	0.38	0.001335	Human integrin beta-5 subunit mRNA, comp
GB	T96731	-0.24	-0.14	0.39	0.000652	EST: Highly similar to HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DX BETA CHAIN PRECURSOR [Homo sapiens]
GB	M94054	-0.09	-0.35	0.44	0.000863	Human lysyl oxidase (LOX) mRNA, complete cds.
GB	X00351	-0.35	-0.09	0.43	0.000429	Human mRNA for beta-actin.
INCYTE	3248833H1	-0.20	-0.16	0.36	0.000711	HumanmRNAencodingRAMP1.
GB	U37791	-0.17	-0.18	0.35	0.000237	Homo sapiens clone rasi-1 matrix metalloproteinase RASI-1 mRNA, complete cds.
GB	AA435938	-0.19	-0.16	0.35	0.000038	EST: zu01a08.s1 Soares_testis_NHT Homo sapiens cDNA clone 730550 3' similar to TR:G817957 G817957 GLYCINE RECEPTOR SUBUNIT ALPHA 4 ; mRNA sequence.
GB	AA443497	-0.14	-0.23	0.37	0.001731	EST: Human clone 23732 mRNA, partial cds
GB	U83410	-0.16	-0.19	0.34	0.000301	Human CUL-2 (cul-2) mRNA, complete cds.

Figure 12b

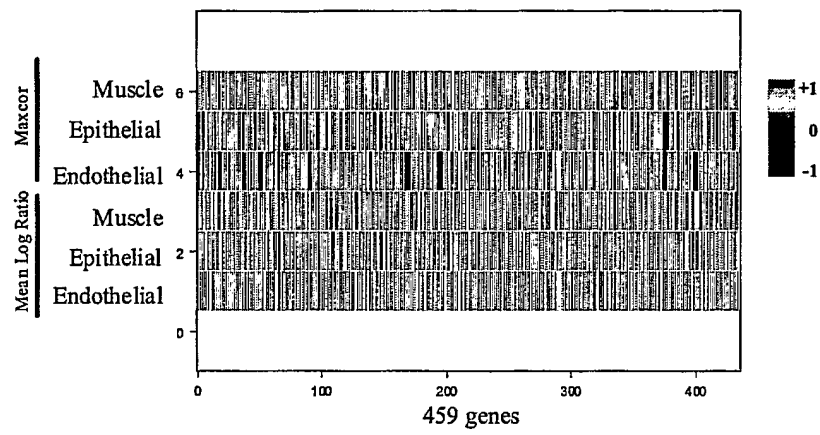


Figure 13

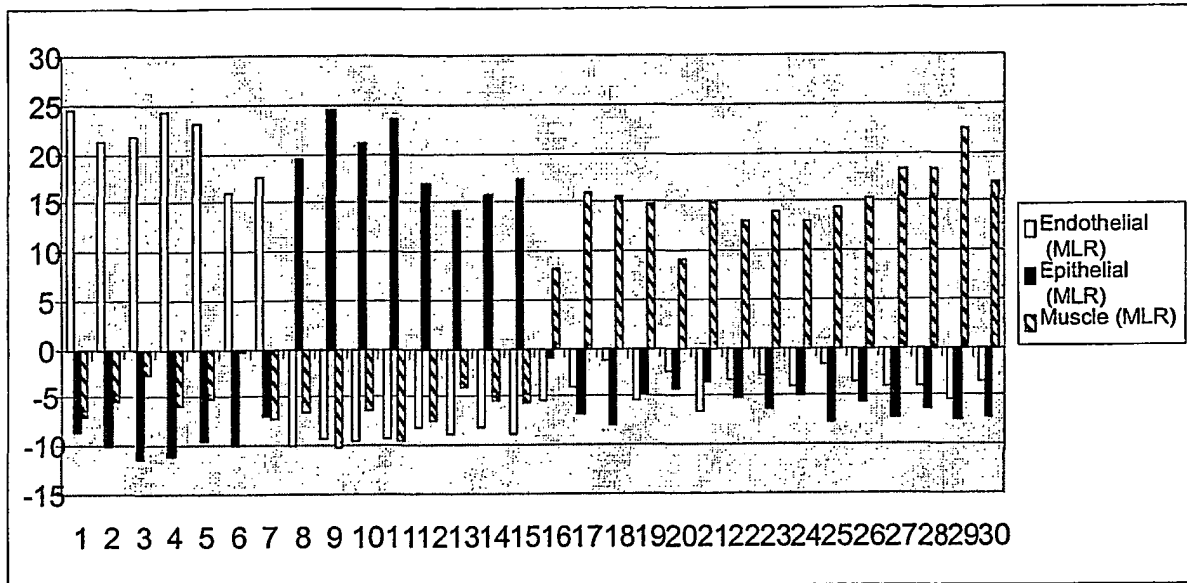


Figure 14

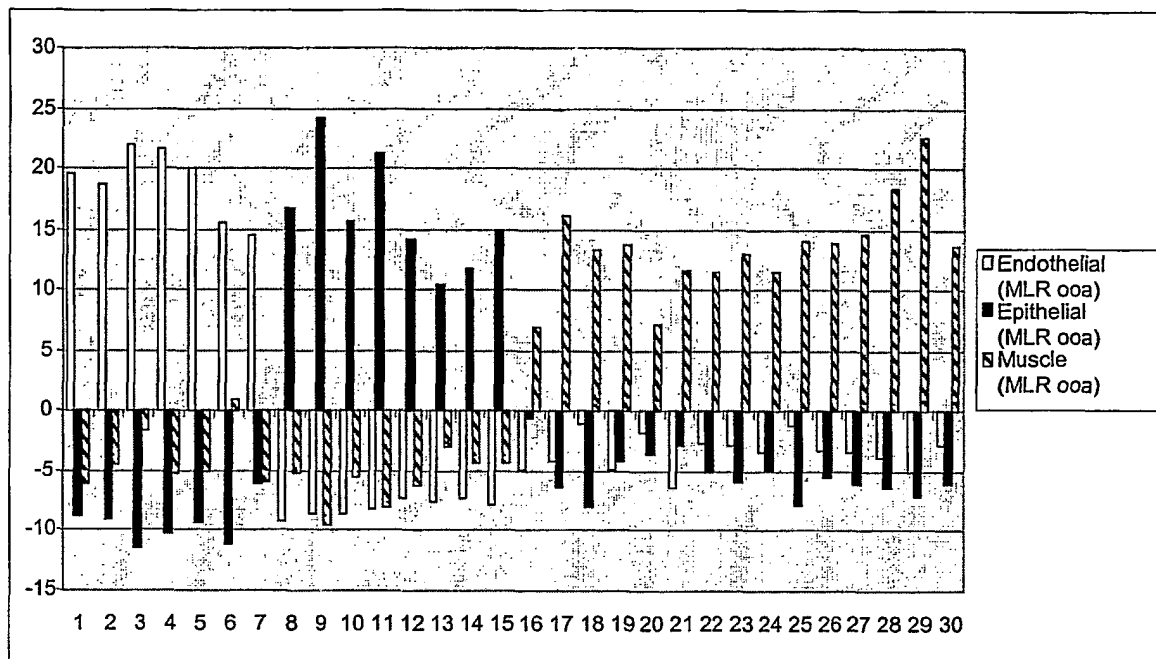


Figure 15

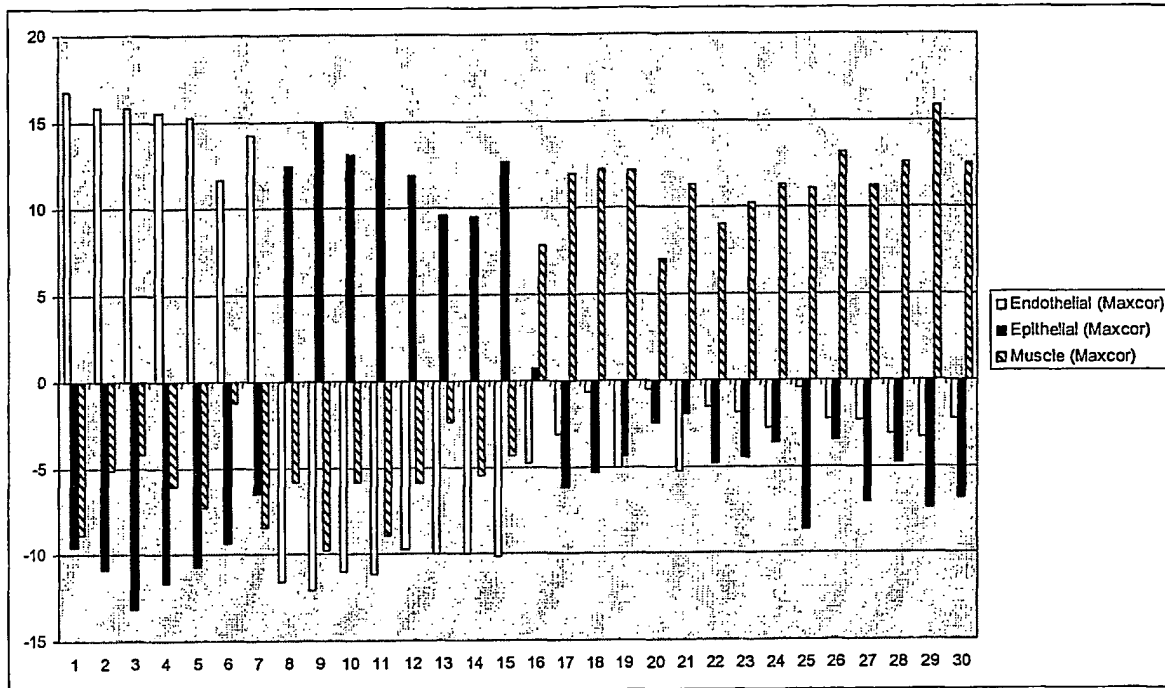


Figure 16

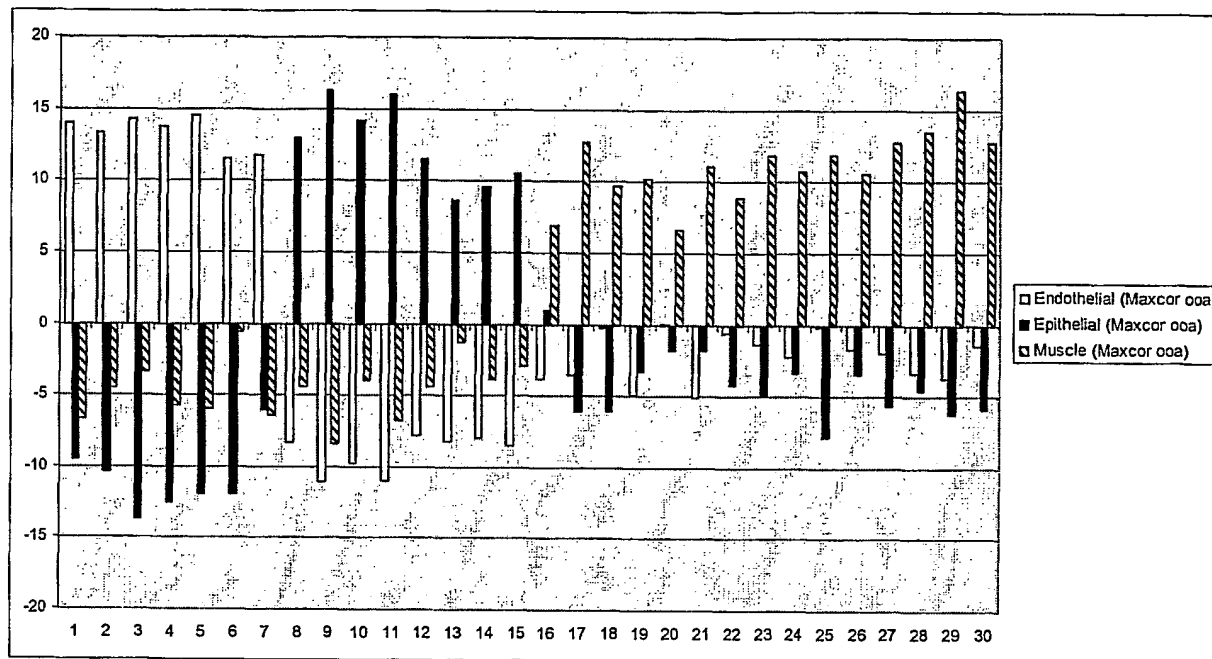


Figure 17

Seq Id No:	Accession	keratinocyte	Mammary	Bronchial	Prostate	Renal cortical	Renal prox tubule	Small airway	Renal
187	T70429	4.547079	0.313402	0.86323	0.483849	0.230928	0.175945	1.176632	0.208935
188	Z67743	3.876564	0.42035	0.507089	1.040867	0.447039	0.960801	0.346956	0.400334
189	M33882	3.595819	0.278746	0.390244	0.557491	1.045296	0.752613	0.641115	0.738676
190	M13755	3.214564	0.301691	0.49935	0.530559	1.102731	1.144343	0.551365	0.655397
191	M10901	3.024	1.264	0.576	0.752	0.416	0.608	0.96	0.4
192	M23317	2.728242	1.83659	0.611012	0.998224	0.316163	0.476021	0.703375	0.330373
193	L12350	2.695082	0.531148	0.734426	1.147541	0.616393	1.101639	0.622951	0.55082
194	2499967T6	2.585789	1.629116	1.109185	0.987868	0.298094	0.519931	0.506066	0.363951
195	093603H1	2.524456	1.984222	1.032502	0.916377	0.30041	0.403913	0.426633	0.411486
196	X57527	2.505837	0.544747	0.88716	0.513619	0.747082	1.291829	0.59144	0.918288
197	g1949404	2.387974	1.643522	1.088046	0.916249	0.355047	0.475304	0.692913	0.440945
198	H79778	2.33954	0.884995	0.709748	0.814896	0.779847	0.788609	0.884995	0.797371
199	X72781	2.326241	1.34279	1.229314	1.040189	0.406619	0.312057	1.106383	0.236407
200	5171695H1	2.295567	1.093596	1.103448	0.995074	0.384236	0.35468	1.497537	0.275862
201	K00650	2.252427	0.634304	1.177994	0.440129	1.061489	0.504854	0.673139	1.255663
202	U26644	2.216777	1.259189	1.28935	0.980207	0.233742	0.211122	1.651272	0.158341
203	T98394	2.20885	0.948673	1.146903	0.495575	0.552212	0.849558	1.231858	0.566372
204	L26336	2.186139	0.69703	0.570297	0.570297	1.346535	0.950495	0.665347	1.013861
205	Z29330	2.166376	1.891798	0.823735	0.881908	0.477022	0.611984	0.511926	0.635253
206	4694921H1	2.1473	1.558101	1.060556	1.008183	0.484452	0.549918	0.733224	0.458265
207	N39161	2.125352	1.020169	0.791152	0.813706	0.839731	0.397311	1.136413	0.876166
208	U41070	2.094808	0.884876	1.571106	0.848758	0.613995	0.577878	0.939052	0.469526
209	D89078	2.072072	0.828829	1.495495	0.828829	0.630631	0.576577	1.027027	0.540541
210	M27602	2.025641	1.589744	1.064103	0.974359	0.5	0.410256	1.064103	0.371795
211	M24594	2.020761	0.525952	0.719723	0.747405	1.051903	0.99654	1.107266	0.83045
150	M86849	1.716609	0.280263	2.554895	1.784173	0.090084	0.205192	1.283703	0.08508
27	M75165	1.456765	1.717192	2.213632	0.602238	0.618515	0.272635	0.29705	0.821974
169	2027449H1	1.41744	1.707792	2.074212	1.654917	0.24026	0.342301	0.461039	0.102041
212	1442951T6	1.414274	2.287121	0.922067	0.712059	0.574241	0.843314	0.446267	0.800656
213	AA486305	1.302932	2.442066	0.666356	0.342485	1.0349	0.748255	0.323872	1.139134
131	M63099	1.269036	0.436548	2.263959	1.269036	0.365482	0.274112	1.796954	0.324873

Figure 18a

Seq Id No:	Accession	keratinocyte	Mammary	Bronchial	Prostate	Renal cortical	Renal prox tubule	Small airway	Renal
214	M59373	1.198984	0.948349	2.011854	1.144793	0.724809	0.636749	0.514818	0.819644
215	AA047666	1.186226	0.93324	2.063247	1.163739	0.382291	0.376669	1.54603	0.348559
216	AA488969	1.181664	2.037351	0.692699	0.611205	0.63837	1.113752	0.814941	0.910017
217	IO9069	1.17889	1.425634	1.88074	2.582591	0.169979	0.180946	0.422207	0.159013
218	M63904	1.168646	1.083135	1.539192	2.014252	0.294537	0.256532	1.35867	0.285036
138	H98534	1.167653	0.489152	0.757396	0.804734	0.710059	2.130178	0.757396	1.183432
219	H78484	1.15122	0.643902	0.663415	0.741463	2.321951	0.839024	0.760976	0.878049
220	3386358H1	1.142857	0.474725	1.072527	0.879121	0.703297	0.615385	2.514286	0.597802
221	R07560	1.125926	0.82963	1.204938	0.888889	0.523457	0.602469	2.449383	0.375309
222	4730434H1	1.116751	0.426396	1.461929	1.116751	0.649746	0.609137	2.192893	0.426396
223	R53652	1.107692	0.615385	2.092308	0.8	0.861538	0.769231	1.261538	0.492308
224	AA398883	1.076453	0.562691	2.006116	0.66055	0.733945	1.46789	0.978593	0.513761
225	AA598776	1.069692	2.424635	0.735818	0.557536	1.128039	0.936791	0.269044	0.878444
226	AA423867	1.053556	2.156277	0.660228	0.965759	0.60755	0.428446	1.675154	0.453029
227	Y14734	1.045149	2.789625	1.260327	0.630163	0.422671	0.49952	0.845341	0.507205
228	R93782	1.044335	0.650246	0.7422	0.689655	1.425287	2.055829	0.407225	0.985222
229	2723646H1	1.027933	0.513966	1.564246	1.162011	0.648045	0.625698	2.011173	0.446927
230	U46005	0.992908	0.778116	0.911854	1.14691	0.636272	0.656535	2.289767	0.587639
231	AA479252	0.967033	0.791209	0.879121	0.683761	1.074481	0.791209	2.06105	0.752137
232	T70122	0.954274	0.779324	0.689198	1.134526	0.795229	0.827038	2.078197	0.742213
78	S82666	0.951351	2.205405	0.73033	1.566366	0.73033	0.163363	1.475075	0.177778
233	3447387H2	0.942966	0.51711	1.247148	0.912548	0.882129	0.821293	2.159696	0.51711
234	2863932H1	0.9	0.575	0.8	0.825	1.05	0.9	2.075	0.875
235	5208013H1	0.845528	1.105691	1.322493	0.737127	0.758808	0.650407	2.081301	0.498645
236	873192H1	0.843956	0.386813	0.861538	0.914286	0.984615	2.338462	0.632967	1.037363
237	R83270	0.838021	0.838021	0.938894	0.419011	1.101843	0.876819	2.071775	0.915616
238	L12060	0.834356	1.006135	1.079755	0.809816	0.883436	0.736196	2.159509	0.490798
239	1909132F6	0.832215	2.52349	0.832215	0.832215	0.751678	0.751678	0.993289	0.483221
240	AA292583	0.829876	0.829876	0.630705	1.145228	0.962656	0.746888	2.024896	0.829876
241	2581223T6	0.814159	0.679646	2.024779	0.920354	0.665487	0.665487	1.465487	0.764602
242	T94781	0.808602	0.378495	0.808602	0.963441	1.015054	2.511828	0.636559	0.877419

Figure 18b

Seq Id No:	Accession	keratinocyte	Mammary	Bronchial	Prostate	Renal cortical	Renal prox tubule	Small airway	Renal
243	N67917	0.7979	1.126859	3.107612	0.657918	0.88189	0.279965	0.713911	0.433946
64	290375H1	0.787879	0.989899	1.414141	2.020202	0.707071	0.727273	0.848485	0.505051
244	M69226	0.768293	0.768293	2.012195	1.341463	0.378049	0.560976	1.756098	0.414634
245	AA011215	0.743276	0.586797	1.017115	0.899756	0.821516	0.723716	2.288509	0.919315
246	1693028H1	0.733624	0.89083	0.681223	1.344978	0.908297	0.69869	2.061135	0.681223
247	2519384H1	0.730097	0.792233	0.807767	1.335922	0.823301	0.714563	2.066019	0.730097
248	R31521	0.723404	0.957447	0.829787	0.659574	0.808511	0.680851	2.617021	0.723404
249	H96850	0.719393	0.754063	0.7974	1.109426	0.667389	0.702059	2.626219	0.624052
250	X95383	0.703297	0.43956	0.492308	0.58022	1.178022	2.602198	0.931868	1.072527
251	AA453663	0.696517	0.577114	1.273632	0.716418	1.014925	0.79602	2.149254	0.776119
252	AA504204	0.695652	0.811594	0.672464	0.742029	1.02029	1.02029	2.226087	0.811594
253	N59542	0.678571	0.455357	0.5	0.5	1.508929	1.339286	0.383929	2.633929
254	AA599176	0.665169	0.683146	1.132584	0.808989	1.006742	0.898876	2.103371	0.701124
37	AA443688	0.657825	0.636605	0.721485	0.615385	0.827586	0.976127	1.018568	2.546419
106	X56134	0.652316	1.839008	0.506197	0.706588	1.042661	2.045662	0.049054	1.158513
255	T58002	0.639309	0.506839	2.37293	1.071274	1.174946	0.575954	0.956084	0.702664
123	X12881	0.631706	0.470163	0.62608	1.055254	2.340366	1.353426	0.269238	1.253767
256	M76672	0.627178	1.240418	2.341463	1.686411	0.45993	0.432056	0.752613	0.45993
257	H73961	0.621601	0.696193	1.498057	0.640249	0.901321	0.640249	2.455322	0.547009
258	L76631	0.595238	0.47619	0.642857	0.642857	1.238095	2.404762	0.928571	1.071429
259	L78207	0.590497	0.879217	1.468263	2.012332	0.899528	0.821182	0.645629	0.683351
260	2211267F6	0.584927	0.512936	0.710911	0.485939	1.088864	2.654668	0.368954	1.592801
261	M54933	0.58427	1.423221	2.367041	1.707865	0.419476	0.419476	0.808989	0.269663
262	AA402960	0.582996	0.615385	0.809717	0.777328	1.036437	2.072874	1.263158	0.842105
263	D14695	0.580609	0.913019	0.647091	0.576177	1.010526	0.686981	2.699169	0.886427
264	X87159	0.578723	0.612766	0.885106	0.817021	1.32766	0.953191	2.144681	0.680851
265	U59167	0.568421	0.463158	0.715789	0.757895	1.052632	1.221053	2.189474	1.031579
266	1649377H1	0.561983	0.561983	0.859504	0.826446	0.92562	2.512397	1.190083	0.561983
267	L22206	0.550607	0.582996	0.744939	0.809717	2.234818	0.939271	1.263158	0.874494
268	X06989	0.543909	0.736544	0.566572	0.532578	0.589235	1.133144	3.184136	0.713881
269	3107995H1	0.540084	0.540084	0.742616	0.877637	1.113924	1.181435	2.396624	0.607595

Figure 18c

Seq Id No:	Accession	keratinocyte	Mammary	Bronchial	Prostate	Renal cortical	Renal prox tubule	Small airway	Renal
57	AA292676	0.537764	0.410876	1.003021	0.622356	2.030211	0.827795	1.268882	1.299094
70	D12763	0.536489	0.315582	1.293886	0.946746	0.883629	0.457594	3.092702	0.473373
270	M17017	0.533333	0.853333	0.853333	0.8	2.053333	0.933333	1.36	0.613333
271	L33404	0.526946	2.299401	1.021956	1.229541	0.750499	0.510978	1.229541	0.431138
272	2726949H1	0.518519	0.555556	0.888889	0.851852	0.962963	2.37037	1.296296	0.555556
273	2726952H1	0.517241	0.517241	0.862069	0.793103	0.896552	2.655172	1.206897	0.551724
274	H51066	0.512535	0.401114	0.64624	0.824513	1.470752	2.339833	1.069638	0.735376
275	AA446565	0.508124	0.732644	0.78582	0.768095	1.353028	2.002954	0.59675	1.252585
276	T99650	0.505747	0.45977	0.574713	0.62069	0.873563	3.241379	0.91954	0.804598
277	463614H1	0.504505	0.576577	0.864865	0.864865	1.081081	1.369369	2.018018	0.720721
278	Y00318	0.492813	0.361396	0.50924	0.459959	1.084189	3.022587	0.788501	1.281314
279	M64349	0.489664	1.349007	0.518849	0.573976	2.010539	1.044183	0.713417	1.300365
104	H57180	0.489209	0.517986	0.834532	0.805755	2.215827	0.892086	1.093525	1.151079
280	U04357	0.48855	0.519084	0.732824	0.793893	2.59542	0.854962	1.251908	0.763359
281	4161733H1	0.48731	0.609137	0.893401	0.974619	1.055838	1.015228	2.395939	0.568528
282	M60278	0.482353	1.152941	1.411765	0.811765	0.764706	0.564706	2.176471	0.635294
283	X61498	0.48	1.048889	0.746667	0.746667	2.133333	0.871111	0.924444	1.048889
284	M37724	0.48	0.512	0.768	0.8	1.184	2.432	1.184	0.64
285	1322305T6	0.479616	2.532374	1.323741	1.016787	0.690647	0.613909	0.863309	0.479616
286	1284795H1	0.470588	0.5	1.264706	1.264706	0.852941	0.823529	2.264706	0.558824
287	349590H1	0.467153	0.525547	0.788321	0.759124	0.992701	1.284672	2.452555	0.729927
288	M28638	0.466302	0.276867	0.422587	0.408015	1.384335	3.497268	0.582878	0.961749
160	4727571H1	0.465696	0.393624	0.532225	0.371448	2.361746	1.61885	0.310464	1.945946
289	W85914	0.46438	2.237467	1.182058	1.034301	0.527704	0.633245	1.245383	0.675462
290	3526532H1	0.45977	0.521073	1.164751	0.888889	0.950192	1.042146	2.421456	0.551724
291	M54894	0.457831	0.409639	0.578313	0.60241	2.506024	1.180723	0.963855	1.301205
292	3382940	0.455696	0.455696	0.886076	0.734177	0.835443	0.911392	3.265823	0.455696
293	X07820	0.454545	0.575758	1	2.545455	0.909091	0.818182	1.212121	0.484848
294	R00275	0.45283	0.467925	0.558491	0.528302	0.845283	0.860377	3.54717	0.739623
295	AA029889	0.442211	0.348409	0.80402	0.482412	0.763819	2.921273	0.696817	1.541039
296	L08096	0.438819	0.57384	0.742616	0.776371	1.012658	2.632911	1.248945	0.57384

Figure 18d

Seq Id No:	Accession	keratinocyte	Mammary	Bronchial	Prostate	Renal cortical	Renal prox tubule	Small airway	Renal
297	R32756	0.436526	0.311804	0.74833	0.890869	1.728285	2.03118	0.685969	1.167038
49	AA488073	0.433812	0.325359	0.937799	0.433812	2.347687	0.905901	1.097289	1.518341
298	556963H1	0.424581	0.446927	0.826816	0.715084	0.759777	0.804469	3.463687	0.558659
299	M37722	0.421907	0.340771	0.503043	0.454361	1.022312	2.953347	0.600406	1.703854
300	AA448094	0.415584	0.292208	0.448052	0.415584	1.376623	2.844156	0.376623	1.831169
301	AA489400	0.414169	1.416894	0.588556	0.566757	0.959128	2.179837	0.871935	1.002725
032	g1751443	0.407407	0.358025	0.691358	2.271605	1.037037	0.506173	1.703704	1.024691
0303	2731293H1	0.401544	0.30888	0.957529	0.432432	1.281853	0.571429	2.795367	1.250965
304	AA521431	0.392707	0.291725	0.695652	0.392707	1.492286	1.952314	0.437588	2.345021
035	AA233079	0.383562	0.438356	0.657534	0.684932	2.164384	0.876712	1.041096	1.753425
036	M26383	0.383333	0.316667	0.55	0.466667	1.383333	2.883333	0.65	1.366667
307	3530687H1	0.382166	0.407643	0.789809	1.070064	2.012739	1.197452	1.070064	1.070064
308	N41062	0.371134	0.412371	0.639175	0.721649	1.546392	2.082474	1.092784	1.134021
183	903559H1	0.37037	0.311111	1.214815	0.444444	1.422222	0.607407	2.207407	1.422222
309	AA419108	0.369231	0.298901	0.43956	0.457143	1.441758	2.813187	0.773626	1.406593
310	J03561	0.366197	1.028169	0.859155	0.464789	2.464789	0.957746	0.802817	1.056338
311	M34064	0.362369	0.390244	0.641115	0.66899	1.254355	2.759582	0.97561	0.947735
312	1334463H1	0.35468	0.35468	1.615764	1.852217	0.610837	0.571429	2.246305	0.394089
313	AA486085	0.348515	0.744554	0.50165	0.971617	2.006601	0.987459	0.744554	1.69505
314	M64749	0.337778	0.888889	2.88	1.6	0.551111	0.515556	0.888889	0.337778
315	M60278	0.330794	0.618063	1.479869	0.739935	0.696409	0.417845	3.299238	0.417845
316	K02765	0.328767	0.591781	0.810959	0.635616	0.920548	2.761644	1.227397	0.723288
310	J03561	0.326531	0.755102	0.908163	0.469388	2.969388	1.030612	0.632653	0.908163
317	AA460571	0.31746	0.31746	1.174603	0.444444	1.015873	1.015873	2.555556	1.15873
174	4872203H1	0.306011	0.091075	0.830601	1.315118	1.260474	0.52459	2.185792	1.486339
157	268	0.302267	0.246851	0.397985	0.347607	3.511335	0.675063	0.710327	1.808564
318	1226731H1	0.289738	1.448692	0.450704	0.515091	1.046278	2.478873	0.595573	1.17505
319	264	0.286765	0.147059	0.474265	1.084559	0.738971	0.433824	3.488971	1.345588
320	X54925	0.285714	0.396313	0.451613	2.073733	1.253456	1.437788	1.658986	0.442396
173	1227785H1	0.285389	0.11537	0.570778	1.16888	1.190133	0.522201	2.556357	1.590892
321	H16637	0.279365	0.304762	0.444444	0.380952	1.320635	3.619048	0.55873	1.092063

Figure 18e

Seq Id No:	Accession	keratinocyte	Mammary	Bronchial	Prostate	Renal cortical	Renal prox tubule	Small airway	Renal
322	2496910H1	0.272545	0.320641	0.46493	0.432866	1.667335	3.142285	0.609218	1.09018
323	3558269H1	0.264591	0.29572	0.544747	0.404669	1.929961	1.089494	1.120623	2.350195
324	T90375	0.248939	0.724187	0.565771	0.384724	1.471004	1.459689	0.701556	2.44413
325	U81233	0.234483	0.275862	0.427586	0.524138	3.462069	1.089655	0.827586	1.158621
326	M84683	0.208605	0.177314	0.490222	0.292047	3.588005	1.011734	0.792699	1.439374
158	279279H1	0.206406	1.864769	0.768683	0.704626	0.690391	2.298932	1.024911	0.441281
327	1484836T6	0.196248	1.466089	0.380952	0.34632	3.578644	0.496392	0.507937	1.027417
328	T52894	0.182077	0.216216	0.295875	0.534851	1.672831	3.834993	0.614509	0.648649
165	AA454743	0.158612	1.258984	0.39653	0.297398	3.925651	0.465923	0.406444	1.090458
166	U62801	0.154176	1.027837	0.394004	0.316916	4.471092	0.4197	0.359743	0.856531
329	M23699	0.126582	1.324895	0.7173	0.700422	0.953586	2.708861	0.987342	0.481013

Figure 18f

SEQUENCE LISTING

SEQ ID NO: 1

>gi|32623|emb|X15606.1|HSICAM2 Human mRNA for ICAM-2, cell adhesion ligand for LFA-1

5 CTAAAGATCTCCCTCCAGGCAGCCCTTGGCTGGTCCCTGCGAGCCCGTGGAGACT
GCCAGAGATGTCCTCTTTCGGTTACAGGACCCTGACTGTGGCCCTCTTCACCCTG
ATCTGCTGTCCAGGATCGGATGAGAAGGTATTCGAGGTACACGTGAGGCCAAAG
AAGCTGGCGGTTGAGCCCAAGGGTCCCTCGAGGTCAACTGCAGCACCACCTGT
10 AACCAGCCTGAAGTGGGTGGTCTGGAGACCTCTCTAAATAAGATTCTGCTGGACG
AACAGGCTCAGTGGAAACATTACTTGGTCTCAAACATCTCCCATGACACGGTCCT
CCAATGCCACTTCACCTGCTCCGGGAAGCAGGAGTCAATGAATTCCAACGTCAGC
GTGTACCAGCCTCCAAGGCAGGTCATCCTGACACTGCAACCCACTTTGGTGGCTG
TGGGCAAGTCCTTCACCATTGAGTGCAGGGTGCCACCGTGGAGCCCCTGGACA
15 GCCTCACCTCTTCCCTGTTCCGTGGCAATGAGACTCTGCACTATGAGACCTTCGG
GAAGGCAGCCCCTGCTCCGCAGGAGGCCACAGCCACATTCAACAGCACGGCTGA
CAGAGAGGATGGCCACCGCAACTTCTCCTGCCTGGCTGTGCTGGACTTGATGTCT
CGCGGTGGCAACATCTTTCACAAACACTCAGCCCCGAAGATGTTGGAGATCTATG
AGCCTGTGTCGGACAGCCAGATGGTCATCATAGTCACGGTGGTGTGCGGTGTTGCT
20 GTCCCTGTTCTGTGACATCTGTCCTGCTCTGCTTCATCTTCGGCCAGCACTTGCGCC
AGCAGCGGATGGGCACCTACGGGGTGCGAGCGGCTTGGAGGAGGCTGCCCCAGG
CCTTCCGGCCATAGCAACCATGAGTGGCATGGCCACCACCACGGTGGTCACTGG
AACTCAGTGTGACTCCTCAGGGTTGAGGTCCAGCCCTGGCTGAAGGACTGTGACA
GGCAGCAGAGACTTGGGACATTGCCTTTTCTAGCCCGAATACAAACACCTGGACT
25 T

SEQ ID NO: 2

>gi|777193|gb|R22412.1|R22412 yh23b03.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:130541 3' similar to contains Alu repetitive element;

30 TTTTGTCAAAGAGCAAAGGTCAAATTTATTTAATAACAACATCCACGAGGGTCCCT
GCAGCTNTGTCACTGAGGCAAACAGGAAAAGTGATTTTGGCTAGGCGTGGTTCTC
ATCTGTGAAATTCCACAGCGCAATGACAGCAGCCTNTNTCCCACTCAAGAC
ACTNTCAGGANTGTNTTAAGACCTCAGGAGACCANTTNTTTAGCAAGCAATTTTG
TTTTTGTTTTTTTTGGAGATGGGNTTCTCACTCTGTCACTCAGGCTGGGAGTGCAG
35 TGGCGCGATCTCCCGCTCACTANAACNCCGTTTCCNGGGGGGTCAAGGGGNTA
ATTCACCTCAGGCCCTTG

SEQ ID NO: 3

>gi|37946|emb|X04385.1|HSVWFR1 Human mRNA for pre-pro-von Willebrand factor

40 GCAGCTGAGAGCATGGCCTAGGGTGGGCGGCACCATTGTCCAGCAGCTGAGTTT
CCCAGGGACCTTGGAGATAGCCGCAGCCCTCATTTCAGGGGAAGATGATTCCT
GCCAGATTTGCCGGGGTGCTGCTTGCTCTGGCCCTCATTTTGCCAGGGACCTTTG
TGCAGAAGGAACTCGCGGCAGGTCATCCACGGCCCGATGCAGCCTTTTCGGAAG
TGACTTCGTCAACACCTTTGATGGGAGCATGTACAGCTTTGCGGGATACTGCAGT
45 TACCTCCTGGCAGGGGGCTGCCAGAAACGCTCCTTCTCGATTATTGGGGACTTCC
AGAATGGCAAGAGAGTGAGCCTCTCCGTGTATCTTGGGGAATTTTTTGACATCCA
TTTGTGTTGTCAATGGTACCGTGACACAGGGGGACCAAAGAGTCTCCATGCCCTAT
GCCTCCAAAGGGCTGTATCTAGAAACTGAGGCTGGGTACTACAAGCTGTCCGGT

GAGGCCTATGGCTTTGTGGCCAGGATCGATGGCAGCGGCAACTTTCAAGTCCTGC
TGTCAGACAGATACTTCAACAAGACCTGCGGGCTGTGTGGCAACTTTAACATCTT
TGCTGAAGATGACTTTATGACCCAAGAAGGGACCTTGACCTCGGACCCTTATGAC
TTTGCCAACTCATGGGCTCTGAGCAGTGGAGAACAGTGGTGTGAACGGGCATCTC
5 CTCCCAGCAGCTCATGCAACATCTCCTCTGGGGAAATGCAGAAGGGCCTGTGGG
AGCAGTGCCAGCTTCTGAAGAGCACCTCGGTGTTTGCCCGCTGCCACCCTCTGGT
GGACCCCGAGCCTTTTGTGGCCCTGTGTGAGAAGACTTTGTGTGAGTGTGCTGGG
GGGCTGGAGTGCGCCTGCCCTGCCCTCCTGGAGTACGCCCCGACCTGTGCCCAGG
AGGGAATGGTGTGTACGGCTGGACCGACCACAGCGCGTGCAGCCCAGTGTGCC
10 CTGCTGGTATGGAGTATAGGCAGTGTGTGTCCCCTTGCGCCAGGACCTGCCAGAG
CCTGCACATCAATGAAATGTGTGAGGAGCGATGCGTGGATGGCTGCAGCTGCCCT
GAGGGACAGCTCCTGGATGAAGGCCTCTGCGTGGAGAGCACCGAGTGTCCCTGC
GTGCATTCCGGAAAGCGCTACCCTCCCGGCACCTCCCTCTCTCGAGACTGCAACA
CCTGCATTTGCCGAAACAGCCAGTGGATCTGCAGCAATGAAGAATGTCCAGGGG
15 AGTGCCTTGTACAGGTCAATCACACTTCAAGAGCTTTGACAACAGATACTTCAC
CTTCAGTGGGATCTGCCAGTACCTGCTGGCCCCGGGATTGCCAGGACCACTCCTTC
TCCATTGTCATTGAGACTGTCCAGTGTGCTGATGACCGCGACGCTGTGTGACCCC
GCTCCGTCACCGTCCGGCTGCCTGGCCTGCACAACAGCCTTGTGAAACTGAAGCA
TGGGGCAGGAGTTGCCATGGATGGCCAGGACGTCCAGCTCCCCCTCCTGAAAGG
20 TGACCTCCGCATCCAGCATAACAGTGACGGCCTCCGTGCGCCTCAGCTACGGGGAG
GACCTGCAGATGGACTGGGATGGCCGCGGGAGGCTGCTGGTGAAGCTGTCCCCC
GTCTATGCCGGGAAGACCTGCGGCCTGTGTGGGAATTACAATGGCAACCAGGGC
GACGACTTCCTTACCCCCCTCTGGGCTGGCGGAGCCCCGGGTGGAGGACTTCGGGA
ACGCCTGGAAGCTGCACGGGGACTGCCAGGACCTGCAGAAGCAGCACAGCGATC
25 CCTGCGCCCTCAACCCGCGCATGACCAGGTTCTCCGAGGAGGCGTGCAGCGGTCT
GACGTCCCCCACATTGAGGCCTGCCATCGTGCCGTCAGCCCCGCTGCCCTACCTG
CGGAACTGCCGCTACGACGTGTGCTCCTGCTCGGACGGCCGCGAGTGCCTGTGCG
GCGCCCTGGCCAGCTATGCCGCGGCCTGCGCGGGGAGAGGCGTGCAGCGTCGCGT
GGCGCGAGCCAGGCCGCTGTGAGCTGAACTGCCCGAAAGGCCAGGTGTACCTGC
30 AGTGCGGGACCCCCCTGCAACCTGACCTGCCGCTCTCTCTTACCCGGATGAGGA
ATGCAATGAGGCCTGCCTGGAGGGCTGCTTCTGCCCCCAGGGCTCTACATGGAT
GAGAGGGGGGACTGCGTGCCCAAGGCCAGTGCCCTGTTACTATGACGGTGAG
ATCTTCCAGCCAGAAGACATCTTCTCAGACCATCACACCATGTGCTACTGTGAGG
ATGGCTTCATGCACTGTACCATGAGTGGAGTCCCCGGAAGCTTGCTGCCTGACGC
35 TGTCTCAGCAGTCCCCTGTCTCATCGCAGCAAAAGGAGCCTATCCTGTGCGCCC
CCCATGGTCAAGCTGGTGTGTCCCGCTGACAACCTGCGGGCTGAAGGGCTCGAGT
GTACCAAAACGTGCCAGAACTATGACCTGGAGTGCATGAGCATGGGCTGTGTCT
CTGGCTGCCTCTGCCCCCAGGGCATGGTCCGGCATGAGAACAGATGTGTGGCCCT
GGAAAGGTGTCCCTGCTTCCATCAGGGCAAGGAGTATGCCCTGGAGAAACAGT
40 GAAGATTGGCTGCAACACTTGTGTCTGTGCGGGACCGGAAGTGGAAGTGCACAGA
CCATGTGTGTGATGCCACGTGCTCCACGATCGGCATGGCCCACTACCTCACCTTC
GACGGGCTCAAATACCTGTTCCCCGGGGAGTGCCAGTACGTTCTGGTGCAGGATT
ACTGCGGCAGTAACCTGGGACCTTTCGGATCCTAGTGGGGAATAAGGGATGCA
GCCACCCCTCAGTGAAATGCAAGAAACGGGTACCATCCTGGTGGAGGGAGGAG
45 AGATTGAGCTGTTTGACGGGGAGGTGAATGTGAAGAGGCCCATGAAGGATGAGA
CTCACTTTGAGGTGGTGGAGTCTGGCCGGTACATCATTCTGCTGCTGGGCAAAGC
CCTCTCCGTGGTCTGGGACCGCCACCTGAGCATCTCCGTGGTCCTGAAGCAGACA
TACCAGGAGAAAGTGTGTGGCCTGTGTGGGAATTTTGATGGCATCCAGAACAAAT
GACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAAC

TCCTGGAAAGTGAGCTCGCAGTGTGCTGACACCAGAAAAGTGCCTCTGGACTCAT
CCCCTGCCACCTGCCATAACAACATCATGAAGCAGACGATGGTGGATTCCCTCCTG
TAGAATCCTTACCAGTGACGTCTTCCAGGACTGCAACAAGCTGGTGGACCCCGAG
CCATATCTGGATGTCTGCATTTACGACACCTGCTCCTGTGAGTCCATTGGGGACT
5 GCGCCTGCTTCTGCGACACCATTGCTGCCTATGCCCACGTGTGTGCCCAGCATGG
CAAGGTGGTGACCTGGAGGACGGCCACATTGTGCCCCCAGAGCTGCGAGGAGAG
GAATCTCCGGGAGAACGGGTATGAGTGTGAGTGGCGCTATAACAGCTGTGCACC
TGCCTGTCAAGTCACGTGTCAGCACCCCTGAGCCACTGGCCTGCCCTGTGCAGTGT
GTGGAGGGGCTGCCATGCCCCTGCCCTCCAGGGAAAATCCTGGATGAGCTTTTGC
10 AGACCTGCGTTGACCCTGAAGACTGTCCAGTGTGTGAGGTGGCTGGCCGGCGTTT
TGCCTCAGGAAAGAAAGTCACCTTGAATCCCAGTGACCCTGAGCACTGCCAGATT
TGCCACTGTGATGTTGTCAACCTCACCTGTGAAGCCTGCCAGGAGCCGGGAGGCC
TGGTGGTGCCCTCCACAGATGCCCCGGTGAGCCCCACCACTCTGTATGTGGAGGA
CATCTCGGAACCGCCGTTGCACGATTTCTACTGCAGCAGGCTACTGGACCTGGTC
15 TTCCTGCTGGATGGCTCCTCCAGGCTGTCCGAGGCTGAGTTTGAAGTGCTGAAGG
CCTTTGTGGTGGACATGATGGAGCGGCTGCGCATCTCCAGAAGTGGGTCCGCGT
GGCCGTGGTGGAGTACCACGACGGCTCCCACGCCTACATCGGGCTCAAGGACCG
GAAGCGACCGTCAGAGCTGCGGCGCATTGCCAGCCAGGTGAAGTATGCGGGCAG
CCAGGTGGCCTCCACCAGCGAGGTCTTGAAATACACACTGTTCCAAATCTTCAGC
20 AAGATCGACCGCCCTGAAGCCTCCCGCATCGCCCTGCTCCTGATGGCCAGCCAGG
AGCCCCAACGGATGTCCCGGAACTTTGTCCGCTACGTCCAGGGCCTGAAGAAGA
AGAAGGTCATTGTGATCCCGGTGGGCATTGGGGCCCCATGCCAACCTCAAGCAGA
TCCGCCTCATCGAGAAGCAGGCCCTGAGAACAAGGCCTTCGTGCTGAGCAGTG
TGGATGAGCTGGAGCAGCAAAGGGACGAGATCGTTAGCTACCTCTGTGACCTTG
25 CCCCTGAAGCCCCCTCCTCTACTCTGCCCCCCCCACATGGCACAAGTCACTGTGGG
CCCGGGGCTCTTGGGGGTTTCGACCCTGGGGCCCCAAGAGGAACCTCCATGGTTCTG
GATGTGGCGTTTCGTCTGGAAGGATCGGACAAAATTGGTGAAGCCGACTTCAAC
AGGAGCAAGGAGTTCATGGAGGAGGTGATTCAGCGGATGGATGTGGGCCAGGAC
AGCATCCACGTACCGGTGCTGCAGTACTCCTACATGGTGACCGTGAGTACCCCT
30 TCAGCGAGGCACAGTCCAAAGGGGACATCCTGCAGCGGGTGCGAGAGATCCGCT
ACCAGGGCGGCAACAGGACCAACACTGGGCTGGCCCTGCGGTACCTCTCTGACC
ACAGCTTCTTGGTCAGCCAGGGTGACCGGGAGCAGGCGCCCAACCTGGTCTACA
TGGTCACCGGAAATCCTGCCTCTGATGAGATCAAGAGGCTGCCTGGAGACATCC
AGGTGGTGGCCATTGGAGTGGGCCCTAATGCCAACGTGCAGGAGCTGGAGAGGA
35 TTGGCTGGCCCAATGCCCCATCCTCATCCAGGACTTTGAGACGCTCCCCCGAGA
GGCTCCTGACCTGGTGCTGCAGAGGTGCTGCTCCGGAGAGGGGCTGCAGATCCC
CACCTCTCCCCTGCACCTGACTGCAGCCAGCCCCTGGACGTGATCCTTCTCCTG
GATGGCTCCTCCAGTTTCCAGCTTCTTATTTTATGATGAAATGAAGAGTTTCGCCAA
GGCTTTCATTTCAAAAGCCAATATAGGGCCTCGTCTCACTCAGGTGTCAGTGCTG
40 CAGTATGGAAGCATCACCAACATTGACGTGCCATGGAACGTGGTCCCGGAGAAA
GCCCATTTGCTGAGCCTTGTGGACGTCATGCAGCGGGAGGGAGGCCCCAGCCAA
ATCGGGGATGCCTTGGGCTTTGCTGTGCGATACTTGACTTCAGAAATGCATGGTG
CCAGGCCGGGAGCCTCAAAGGCGGTGGTCATCCTGGTCACGGACGTCTCTGTGG
ATTCAGTGGATGCAGCAGCTGATGCCGCCAGGTCCAACAGAGTGACAGTGTTCC
45 CTATTGGAATTGGAGATCGCTACGATGCAGCCCAGCTACGGATCTTGGCAGGCC
AGCAGGCGACTCCAACGTGGTGAAGCTCCAGCGAATCGAAGACCTCCCTACCAT
GGTCACCTTGGGCAATTCCTTCCTCCACAACTGTGCTCTGGATTTGTTAGGATTT
GCATGGATGAGGATGGGAATGAGAAGAGGGCCCGGGGACGTCTGGACCTTGCCAG
ACCAGTGCCACACCGTGACTTGCCAGCCAGATGGCCAGACCTTGCTGAAGACTC

ATCGGGTCAACTGTGACCGGGGGCTGAGGCCTTCGTGCCCTAACAGCCAGTCCCC
TGTTAAAGTGGAAGAGACCTGTGGCTGCCGCTGGACCTGCCCCTGCGTGTGCACA
GGCAGCTCCACTCGGCACATCGTGACCTTTGATGGGCAGAATTTCAAGCTGACTG
GCAGCTGTTCTTATGTCCTATTTCAAAACAAGGAGCAGGACCTGGAGGTGATTCT
5 CCATAATGGTGCCTGCAGCCCTGGAGCAAGGCAGGGCTGCATGAAATCCATCGA
GGTGAAGCACAGTGCCCTCTCCGTCGAGCTGCACAGTGACATGGAGGTGACGGT
GAATGGGAGACTGGTCTCTGTTCCCTTACGTGGGTGGGAACATGGAAGTCAACGTT
TATGGTGCCATCATGCATGAGGTCAGATTCAATCACCTTGGTCACATCTTCACAT
TCACTCCACAAAACAATGAGTTCCAATGCAGCTCAGCCCCAAGACTTTTGCTTC
10 AAAGACGTATGGTCTGTGTGGGATCTGTGATGAGAACGGAGCCAATGACTTCAT
GCTGAGGGGATGGCACAGTCACCACAGACTGGAAAACACTTGTTTCAGGAATGGAC
TGTGCAGCGGCCAGGGCAGACGTGCCAGCCCATCCTGGAGGAGCAGTGTCTTGT
CCCCGACAGCTCCCACTGCCAGGTCCTCCTCTTACCACTGTTTGCTGAATGCCAC
AAGGTCCTGGCTCCAGCCACATTCTATGCCATCTGCCAGCAGGACAGTTGCCACC
15 AGGAGCAAGTGTGTGAGGTGATCGCCTCTTATGCCCACCTCTGTCTGGACCAACGG
GGTCTGCGTTGACTGGAGGACACCTGATTTCTGTGCTATGTCATGCCACCATCT
CTGGTCTACAACCACTGTGAGCATGGCTGTCCCCGGCACTGTGATGGCAACGTGA
GCTCCTGTGGGGACCATCCCTCCGAAGGCTGTTTCTGCCCTCCAGATAAAGTCAT
GTTGGAAGGCAGCTGTGTCCCTGAAGAGGCCTGCACTCAGTGCATTGGTGAGGA
20 TGGAGTCCAGCACCAAGTTCCTGGAAGCCTGGGTCCCGGACCACCAGCCCTGTCAG
ATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCC
ACGGCCAAAGCTCCACAGTGTGGCCTGTGTGAAGTAGCCCGCCTCCGCCAGAAT
GCAGACCAGTGCTGCCCCGAGTATGAGTGTGTGTGTGACCCAGTGAGCTGTGACC
TGCCCCCAGTGCCCTCACTGTGAACGTGGCCTCCAGCCCACACTGACCAACCCTGG
25 CGAGTGCAGACCCAACTTCACCTGCGCCTGCAGGAAGGAGGAGTGCAAAAGAGT
GTCCCCACCCTCCTGCCCCCGCACCGTTTGCCCACCCTTCGGAAGACCCAGTGC
TGTGATGAGTATGAGTGTGCCTGCAACTGTGTCAACTCCACAGTGAGCTGTCCCC
TTGGGTACTTGCCCTCAACCGCCACCAATGACTGTGGCTGTACCACAACCACCTG
CCTTCCCGACAAGGTGTGTGTGCCACCGAAGCACCATCTACCCTGTGGGCCAGTTC
30 TGGGAGGAGGGCTGCGATGTGTGCACCTGCACCGACATGGAGGATGCCGTGATG
GGCCTCCGCGTGGCCCAGTGCTCCCAGAAGCCCTGTGAGGACAGCTGTGGTCTG
GGCTTCACTTACGTTCTGCATGAAGGCGAGTGCTGTGGAAGGTGCCTGCCATCTG
CCTGTGAGGTGGTGACTGGCTCACCGCGGGGGGACTCCCAGTCTTCCTGGAAGA
GTGTCGGCTCCCAGTGGGCCTCCCCGGAGAACCCTGCCTCATCAATGAGTGTGT
35 CCGAGTGAAGGAGGAGGTCTTTATACAACAAAGGAACGTCTCCTGCCCCCAGCT
GGAGGTCCCTGTCTGCCCCCTCGGGCTTTCAGCTGAGCTGTAAGACCTCAGCGTGC
TGCCCAAGCTGTGCTGTGAGCGCATGGAGGCCTGCATGCTCAATGGCACTGTCA
TTGGGCCCCGGAAGACTGTGATGATCGATGTGTGCACGACCTGCCGCTGCATGGT
GCAGGTGGGGGTCATCTCTGGATTCAAGCTGGAGTGCAGGAAGACCACCTGCAA
40 CCCCTGCCCCCTGGGTTACAAGGAAGAAAATAACACAGGTGAATGTTGTGGGAG
ATGTTTGCCTACGGCTTGCAACATTCAAGTAAGAGGAGGACAGATCATGACACTG
AAGCGTGATGAGACGCTCCAGGATGGCTGTGATACTCACTTCTGCAAGGTCAATG
AGAGAGGAGAGTACTTCTGGGAGAAGAGGGTCACAGGCTGCCACCCTTTGATG
AACACAAGTGTCTGGCTGAGGGAGGTAATAATTATGAAAATTCCAGGCACCTGCT
45 GTGACACATGTGAGGAGCCTGAGTGCAACGACATCACTGCCAGGCTGCAGTATG
TCAAGGTGGGAAGCTGTAAGTCTGAAGTAGAGGTGGATATCCACTACTGCCAGG
GCAAATGTGCCAGCAAAGCCATGTACTCCATTGACATCAACGATGTGCAGGACC
AGTGCTCCTGCTGCTCTCCGACACGGACGGAGCCCATGCAGGTGGCCCTGCACTG
CACCAATGGCTCTGTTGTGTACCATGAGGTTCTCAATGCCATGGAGTGCAAATGC

TCCCCCAGGAAGTGCAGCAAGTGAGGCTGCTGCAGCTGCATGGGTGCCTGCTGCTGCC

SEQ ID NO: 4

5 >gi|396814|emb|X60957.1|HSTIEMR Human tie mRNA for putative receptor tyrosine kinase
CGCTCGTCCTGGCTGGCCTGGGTCGGCCTCTGGAGTATGGTCTGGCGGGTGCCCC
CTTCTTGCTCCCCATCCTCTTCTTGGCTTCTCATGTGGGCGCGGCGGTGGACCTG
ACGCTGCTGGCCAACCTGCGGCTCACGGACCCCCAGCGCTTCTTCCTGACTTGCG
TGTCTGGGGAGGCCGGGGCGGGGAGGGGCTCGGACGCCTGGGGCCCCGCCCTGC
10 TGCTGGAGAAGGACGACCGTATCGTGCGCACCCCGCCCGGGCCACCCCTGCGCC
TGGCGCGCAACGGTTTCGCACCAGGTCACGCTTCGCGGCTTCTCCAAGCCCTCGGA
CCTCGTGGGCGTCTTCTCCTGCGTGGGCGGTGCTGGGGCGCGGGCGCACGCGCGTC
ATCTACGTGCACAACAGCCCTGGAGCCCACCTGCTTCCAGACAAGGTCACACAC
ACTGTGAACAAAGGTGACACCGCTGTACTTTCTGCACGTGTGCACAAGGAGAAG
15 CAGACAGACGTGATCTGGAAGAGCAACGGATCCTACTTCTACACCCTGGACTGG
CATGAAGCCCAGGATGGGCGGTTCTGCTGCAGCTCCCAAATGTGCAGCCACCAT
CGAGCGGCATCTACAGTGCCACTTACCTGGAAGCCAGCCCCCTGGGCAGCGCCTT
CTTTCGGCTCATCGTGCGGGGTTGTGGGGCTGGGCGCTGGGGGCCAGGCTGTACC
AAGGAGTGCCCAAGGTTGCCTACATGGAGGTGTCTGCCACGACCATGACGGCGAA
20 TGTGTATGCCCCCTGGCTTCACTGGCACCCGCTGTGAACAGGCCTGCAGAGAGG
GCCGTTTTGGGCAGAGCTGCCAGGAGCAGTGCCCAAGGCATATCAGGCTGCCGGG
GCCTCACCTTCTGCCTCCCAGACCCCTATGGCTGCTCTTGTGGATCTGGCTGGAG
AGGAAGCCAGTGCCAAGAAGCTTGTGCCCCTGGTCATTTTGGGGCTGATTGCCGA
CTCCAGTGCCAGTGTGAGAATGGTGGCACTTGTGACCGGTTCAGTGGTTGTGTCT
25 GCCCCCTCTGGGTGGCATGGAGTGCAGTGTGAGAAGTCAGACCGGATCCCCCAGA
TCCTCAACATGGCCTCAGAACTGGAGTTCAACTTAGAGACGATGCCCCGGATCAA
CTGTGCAGCTGCAGGGAACCCCTTCCCCGTGCGGGGCAGCATAGAGCTACGCAA
GCCAGACGGCACTGTGCTCCTGTCCACCAAGGCCATTGTGGAGCCAGAGAAGAC
CACAGCTGAGTTCGAGGTGCCCCGCTTGGTTCTTGC GGACAGTGGGTTCTGGGAG
30 TGCCGTGTGTCCACATCTGGCGGCCAAGACAGCCGGCGCTTCAAGGTCAATGTGA
AAGTGCCCCCGTGCCCTGGCTGCACCTCGGCTCCTGACCAAGCAGAGCCGCCA
GCTTGTGGTCTCCCCGCTGGTCTCGTTCTCTGGGGATGGACCCATCTCCACTGTCC
GCCTGCACTACCGGCCCCAGGACAGTACCATGGACTGGTCGACCATTGTGGTGG
ACCCAGTGAGAACGTGACGTTAATGAACCTGAGGCCAAAGACAGGATACAGTG
35 TTCGTGTGCAGCTGAGCCGGCCAGGGGAAGGAGGAGAGGGGGCCTGGGGGCCTC
CCACCCTCATGACCACAGACTGTCCTGAGCCTTTGTTGCAGCCGTGGTTGGAGGG
CTGGCATGTGGAAGGCACTGACCGGCTGCGAGTGAGCTGGTCCTTGCCCTTGGTG
CCCGGGCCACTGGTGGGCGACGGTTTCCTGCTGCGCCTGTGGGACGGGACACGG
GGGCAGGAGCGGCGGGAGAACGTCTCATCCCCCAGGCCCGCACTGCCCTCCTG
40 ACGGGACTCACGCCTGGCACCCACTACCAGCTGGATGTGCAGCTCTACCACTGCA
CCCTCCTGGGCCCCGGCCTCGCCCCCTGCACACGTGCTTCTGCCCCCAGTGGGCC
TCCAGCCCCCGACACCTCCACGCCAGGCCCTCTCAGACTCCGAGATCCAGCTG
ACATGGAAGCACCCGGAGGCTCTGCCTGGGCCAATATCCAAGTACGTTGTGGAG
GTGCAGGTGGCTGGGGGTGCAGGAGACCCACTGTGGATAGACGTGGACAGGCCT
45 GAGGAGACAAGCACCATCATCCGTGGCCTCAACGCCAGCACGCGCTACCTCTTCC
GCATGCGGGCCAGCATTACAGGGGCTCGGGGACTGGAGCAACACAGTAGAAGAGT
CCACCCTGGGCAACGGGCTGCAGGCTGAGGGCCAGTCCAAGAGAGCCGGGCAG
CTGAAGAGGGCCTGGATCAGCAGCTGATCCTGGCGGTGGTGGGCTCCGTGTCTGC
CACCTGCCTCACCATCCTGGCCGCCCTTTTAACCCTGGTGTGCATCCGCAGAAGC

TGCCTGCATCGGAGACGCACCTTCACCTACCAGTCAGGCTCGGGCGAGGAGACC
 ATCCTGCAGTTCAGCTCAGGGACCTTGACACTTACCCGGCGGCCAAAACCTGCAGC
 CCGAGCCCCTGAGCTACCCAGTGCTAGAGTGGGAGGACATCACCTTTGAGGACC
 TCATCGGGGAGGGGAACTTCGGCCAGGTCATCCGGGCCATGATCAAGAAGGACG
 5 GGCTGAAGATGAACGCAGCCATCAAAATGCTGAAAGAGTATGCCTCTGAAAATG
 ACCATCGTGACTTTGCGGGGAGAACTGGAAGTTCTGTGCAAATTGGGGCATCACCC
 CAACATCATCAACCTCCTGGGGGGCCTGTAAGAACCGAGGTTACTTGTATATCGCT
 ATTGAATATGCCCCCTACGGGAACCTGCTAGATTTTCTGCGGAAAAGCCGGGTCC
 TAGAGACTGACCCAGCTTTTGCTCGAGAGCATGGGACAGCCTCTACCTTAGCTC
 10 CCGGCAGCTGCTGCGTTTCGCCAGTGATGCGGCCAATGGCATGCAGTACCTGAGT
 GAGAAGCAGTTCATCCACAGGGACCTGGCTGCCCGGAATGTGCTGGTCGGAGAG
 AACCTAGCCTCCAAGATTGCAGACTTCGGCCTTTCTCGGGGAGAGGAGGTTTATG
 TGAAGAAGACGATGGGGCGTCTCCCTGTGCGCTGGATGGCCATTGAGTCCCTGA
 ACTACAGTGTCTATAACCACCAAGAGTGATGTCTGGTCCTTTGGAGTCCTTCTTTGG
 15 GAGATAGTGAGCCTTGAGAGGTACACCCTACTGTGGCATGACCTGTGCCGAGCTCT
 ATGAAAAGCTGCCCCAGGGCTACCGCATGGAGCAGCCTCGAAACTGTGACGATG
 AAGTGTACGAGCTGATGCGTCAGTGCTGGCGGGACCGTCCCTATGAGCGACCCC
 CCTTTGCCCAGATTGCGCTACAGCTAGGCCGCATGCTGGAAGCCAGGAAGGCCT
 ATGTGAACATGTCGCTGTTTGAGAACTTCACTTACGCGGGCATTGATGCCACAGC
 20 TGAGGAGGCCTGAGCTGCCATCCAGCCAGAACGTGGCTCTGCTGGCCGGAGCAA
 ACTCTGCTGTCTAACCTGTGACCAGTCTGACCCTTACAGCCTCTGACTTAAGCTGC
 CTAAGGAATTTTTTTAACTTAAGGGAGAAAAAAAGGGATCTGGGGATGGGGTG
 GGCTTAGGGGAACCTGGGTTCCCATGCTTTGTAGGTGTCTCATAGCTATCCTGGGC
 ATCCTTCTTTCTAGTTCAGCTGCCCCACAGGTGTGTTTCCCATCCCACTGCTCCCC
 25 CAACACAAACCCCCACTCCAGCTCCTTCGCTTAAGCCAGCACTCACACCACTAAC
 ATGCCCTGTTTCAGCTACTCCCACTCCCGGCCTGTCATTCAGAAAAAAATAAATGT
 TCTAATAAGCTCCAAAAAAA

SEQ ID NO: 5

30 >gi|298590|gb|S56805.1|S56805 preproendothelin 1 {alternatively transcribed} [human,
 placenta, mRNA, 1251 nt]
 GGAGCTGTTTACCCCCACTCTAATAGGGGTTCAATATAAAAAGCCGGCAGAGAG
 CTGTCCAAGTCAGACGCGCCTCTGCATCTGCGCCAGGCGAACGGGTCTGCGCCT
 CCTGCAGTCCCAGCTCTCCACCACCGCCGCGTGCGCCTGCAGACGCTCCGCTCGC
 35 TGCCTTCTCTCCTGGCAGGCGCTGCCTTTTCTCCCCGTAAAGGGCACTTGGGCTG
 AAGGATCGCTTTGAGATCTGAGGAACCCGCAGCGCTTTGAGGGACCTGAAGCTG
 TTTTCTTCGTTTTCTTTGGGTTCAGTTTGAACGGGAGGTTTTTGATCCCTTTTTT
 TCAGAATGGATTATTTGCTCATGATTTTCTCTCTGCTGTTTGTGGCTTGCCAAGGA
 GCTCCAGAAACAGCAGTCTTAGGCGCTGAGCTCAGCGCGGTGGGTGAGAACGGC
 40 GGGGAGAAACCACTCCAGTCCACCCTGGCGGCTCCGCCGGTCCAAGCGCTGC
 TCCTGCTCGTCCCTGATGGATAAAGAGTGTGTCTACTTCTGCCACCTGGACATCA
 TTTGGGTCAACACTCCCGAGCACGTTGTTCCGTATGGACTTGGAAGCCCTAGGTC
 CAAGAGAGCCTTGAGAGAATTTACTTCCCACAAAGGCAACAGACCGTGAGAATAG
 ATGCCAATGTGCTAGCCAAAAAGACAAGAAGTGCTGGAATTTTTGCCAAGCAGG
 45 AAAAGAACTCAGGGCTGAAGACATTATGGAGAAAGACTGGAATAATCATAAGA
 AAGGAAAAGACTGTTCCAAGCTTGGGAAAAAGTGTATTTATCAGCAGTTAGTGA
 GAGGAAGAAAAATCAGAAGAAGTTCAGAGGAACACCTAAGACAAACCAGGTGCG
 GAGACCATGAGAAACAGCGTCAAATCATCTTTTCATGATCCCAAGCTGAAAGGC
 AAGCCCTCCAGAGAGCGTTATGTGACCCACAACCGAGCACATTGGTGACAGACT

TCGGGGCCTGTCTGAAGCCATAGCCTCCACGGAGAGCCCTGTGGCCGACTCTGCA
 CTCTCCACCCTGGCTGGGATCAGAGCAGGAGCATCCTCTGCTGGTTCCTGACTGG
 CAAAGGACCAGCGTCCTCGTTCAAAACATTCCAAGAAAGGTTAAGGAGTTCCCC
 CAACCATCTTCACTGGCTTCCATCAGTGGTAACTGCTTTGGTCTCTTCTTTCATCT
 5 GGGGATGACAATGGACCTCTCAGCAGAAACACACAGTCACATTCGAATTC

SEQ ID NO: 6

>gi|181948|gb|M31210.1|HUMEDG Human endothelial differentiation protein (edg-1) gene
 mRNA, complete cds

10 TCTAAAGGTCGGGGGAGCAGCAAGATGCGAAGCGAGCCGTACAGATCCCGGGC
 TCTCCGAACGCAACTTCGCCCTGCTTGAGCGAGGCTGCGGTTTCCGAGGCCCTCT
 CCAGCCAAGGAAAAGCTACACAAAAAGCCTGGATCACTCATCGAACCACCCCTG
 AAGCCAGTGAAGGCTCTCTCGCCTCGCCCTCTAGCGTTCGTCTGGAGTAGCGCCA
 CCCC GGCTTCCTGGGGACACAGGGTTGGCACCATTGGGGCCCACCAGCGTCCCGCT
 15 GGTCAAGGCCACCGCAGCTCGGTCTCTGACTACGTCAACTATGATATCATCGTC
 CGGCATTACA ACTACACGGGAAAGCTGAATATCAGCGCGGACAAGGAGAACAGC
 ATTAAACTGACCTCGGTGGTGTTCATTCTCATCTGCTGCTTTATCATCCTGGAGAA
 CATCTTTGTCTTGCTGACCATTTGGAAAACCAAGAAATTCCACCGACCCATGTAC
 TATTTTATTGGCAATCTGGCCCTCTCAGACCTGTTGGCAGGAGTAGCCTACACAG
 20 CTAACCTGCTCTTGTCTGGGGCCACCACCTACAAGCTCACTCCCGCCCAGTGGTT
 TCTGCGGGAAGGGAGTATGTTTGTGGCCCTGTCAGCCTCCGTGTTCAGTCTCCTC
 GCCATCGCCATTGAGCGCTATATCACAATGCTGAAAATGAACTCCACAACGGG
 AGCAATAACTTCCGCCTCTTCCTGCTAATCAGCGCCTGCTGGGTCATCTCCCTCAT
 CCTGGGTGGCCTGCCTATCATGGGCTGGAAGTGCATCAGTGCGCTGTCCAGCTGC
 25 TCCACCGTGCTGCCGCTCTACCACAAGCACTATATCCTCTTCTGCACCACGGTCTT
 CACTCTGCTTCTGCTCTCCATCGTCATTCTGTACTGCAGAATCTACTCCTTGGTCA
 GGACTCGGAGCCGCCGCCTGACGTTCCGCAAGAACATTTCCAAGGCCAGCCGCA
 GCTCTGAGAATGTGGCGCTGCTCAAGACCGTAATTATCGTCCTGAGCGTCTTCAT
 CGCCTGCTGGGCACCGCTCTTCATCCTGCTCCTGCTGGATGTGGGCTGCAAGGTG
 30 AAGACCTGTGACATCCTCTTCAGAGCGGAGTACTTCCTGGTGTAGCTGTGCTCA
 ACTCCGGCACCAACCCCATCATTTACACTCTGACCAACAAGGAGATGCGTCGGGC
 CTTTCATCCGGATCATGTCCTGCTGCAAGTGCCCGAGCGGAGACTCTGCTGGCAAA
 TTCAAGCGACCCATCATCGCCGGCATGGAATTCAGCCGCAGCAAATCGGACAAT
 TCCTCCCACCCCCAGAAAGACGAAGGGGACAACCCAGAGACCATTATGTCTTCT
 35 GGAAACGTCAACTCTTCTTCCTAGAACTGGAAGCTGTCCACCCACCGGAAGCGCT
 CTTTACTTGGTCGCTGGCCACCCCACTGTTTGGAAAAAATCTCTGGGCTTCGAC
 TGCTGCCAGGGAGGAGCTGCTGCAAGCCAGAGGGAGGAAGGGGGAGAATACGA
 ACAGCCTGGTGGTGTGCGGTGTTGGTGGGTAGAGTTAGTTCCTGTGAACAATGCA
 CTGGGAAGGGTGGAGATCAGGTCCCGGCCTGGAATATATATTCTACCCCCCTGGA
 40 GCTTTGATTTTGCAGTGAAGGCTAGCATTGTCAAGCTCCTAAAGGGTTC
 ATTTGGCCCCTCCTCAAAGACTAATGTCCCATGTGAAAGCGTCTCTTGTCTGG
 AGCTTTGAGGAGATGTTTTCCTTCACTTTAGTTTCAAACCCAAGTGAGTGTGTGC
 ACTTCTGCTTCTTTAGGGATGCCCTGTACATCCACACCCCAACCTCCCTTCCCTT
 CATACCCCTCCTCAACGTTCTTTTACTTTATACTTTAACTACCTGAGAGTTATCAG
 45 AGCTGGGGTGTGGAATGATCGATCATCTATAGCAAATAGGCTATGTTGAGTACG
 TAGGCTGTGGGAAGATGAAGATGGTTTGGAGGTGTAAAACAATGTCCTTCGCTG
 AGGCCAAAGTTTCCATGTAAGCGGGATCCGTTTTTTGGAATTTGGTTGAAGTCAC
 TTTGATTTCTTTAAAAACATCTTTTCAATGAAATGTGTTACCATTTTCATATCCAT
 TGAAGCCGAAATCTGCATAAGGAAGCCCACTTTATCTAAATGATATTAGCCAGG

ATCCTTGGTGTCTAGGAGAAACAGACAAGCAAAACAAAGTGAAAACCGAATGG
 ATTAACCTTTTGCAAACCAAGGGAGATTCTTAGCAAATGAGTCTAACAAATATGA
 CATCCGTCTTTCCCACTTTTGTGTGATGTTTATTTTCTGAGTCTTGTGTGATTCATTTT
 AAGCAACAACATGTTGTATTTTGTGTGTGTTAAAAGTACTTTTCTTGATTTTGAAT
 5 GTATTTGTTTCAGGAAGAAGTCATTTTATGGATTTTCTAACCCGTGTAACTTTT
 CTAGAATCCACCCTCTTGTGCCCTTAAGCATTACTTTAACTGGTAGGGAACGCCA
 GAACTTTTAAGTCCAGCTATTCATTAGATAGTAATTGAAGATATGTATAAATATT
 ACAAAGAATAAAAATATATTACTGTCTCTTTAGTATGGTTTTTCTAGTGCAATTAAA
 CCGAGAGATGTCTTGTTTTTTTTAAAAAGAATAGTATTTAATAGGTTTCTGACTTTT
 10 GTGGATCATTTTGCACATAGCTTTATCAACTTTTAAACATTAATAAACTGATTTTT
 TTAAAG

SEQ ID NO: 7

>gi|339561|gb|M60315.1|HUMTGFBC Human transforming growth factor-beta BMP protein
 (tgf-beta) mRNA, complete cds
 15 CGACCATGAGAGATAAGGACTGAGGGCCAGGAAGGGGAAGCGAGCCCGCCGAG
 AGGTGGCGGGGACTGCTCACGCCAAGGGCCACAGCGGCCGCGCTCCGGCCTCGC
 TCCGCCGCTCCACGCCTCGCGGGATCCGCGGGGGCAGCCCGGCCGGGGCGGGGAT
 GCCGGGGCTGGGGCGGAGGGCGCAGTGGCTGTGCTGGTGGTGGGGGCTGCTGTG
 20 CAGCTGCTGCGGGCCCCCGCCGCTGCGGCCGCCCTTGCCCGCTGCCGCGGCCGCC
 GCCGCCGGGGGGCAGCTGCTGGGGGACGGCGGGAGCCCCGGCCGCACGGAGCA
 GCCGCCGCCGCTCGCCGCAGTCCTCCTCGGGCTTCCTGTACCGGCGGGCTCAAGACG
 CAGGAGAAGCGGGAGATGCAGAAGGAGATCTTGTCTGGTGGTGGGGCTCCCGCAC
 CGGCCCGGCCCTGCACGGCCTCCAACAGCCGCAGCCCCCGGCGCTCCGGCAG
 25 CAGGAGGAGCAGCAGCAGCAGCAGCAGCTGCCTCGCGGAGAGCCCCCTCCCGGG
 CGACTGAAGTCCGCGCCCCCTCTTCATGCTGGATCTGTACAACGCCCTGTCCGCCG
 ACAACGACGAGGACGGGGCGTCGGAGGGGGAGAGGCAGCAGTCCTGGCCCCAC
 GAAGCAGCCAGCTCGTCCCAGCGTCGGCAGCCGCCCGGGCGCCGCGCACCCG
 CTCAACCGCAAGAGCCTTCTGGCCCCCGGATCTGGCAGCGGCGGGCGGTCCCCAC
 30 TGACCAGCGCGCAGGACAGCGCCTTCCTCAACGACGCGGACATGGTCATGAGCT
 TTGTGAACCTGGTGGAGTACGACAAGGAGTTCTCCCCTCGTCAGCGACACCACAA
 AGAGTTCAAGTTCAACTTATCCCAGATTCTTGAGGGTGAGGTGGTGACGGCTGCA
 GAATTCGCATCTACAAGGACTGTGTTATGGGGAGTTTTAAAAACCAAACTTTTC
 TTATCAGCATTTATCAAGTCTTACAGGAGCATCAGCACAGAGACTCTGACCTGTT
 35 TTTGTTGGACACCCGTGTAGTATGGGCCTCAGAAGAAGGCTGGCTGGAATTTGAC
 ATCACGGCCACTAGCAATCTGTGGGTTGTGACTCCACAGCATAACATGGGGCTTC
 AGCTGAGCGTGGTGACAAGGGATGGAGTCCACGTCCACCCCCGAGCCGCAGGCC
 TGGTGGGCAGAGACGGCCCTTACGATAAGCAGCCCTTCATGGTGGCTTTCTTCAA
 AGTGAGTGAGGTCCACGTGCGCACCACCAGGTACGCCTCCAGCCGGCGCCGACA
 40 ACAGAGTCGTAATCGCTCTACCCAGTCCCAGGACGTGGCGCGGGTCTCCAGTGCT
 TCAGATTACAACAGCAGTGAATTGAAAACAGCCTGCAGGAAGCATGAGCTGTAT
 GTGAGTTTCCAAGACCTGGGATGGCAGGACTGGATCATTGCACCCAAGGGCTAT
 GCTGCCAATTACTGTGATGGAGAATGCTCCTTCCCACTCAACGCACACATGAATG
 CAACCAACCACGCGATTGTGCAGACCTTGGTTACCTTATGAACCCCGAGTATGT
 45 CCCCAAACCGTGCTGTGCGCCAATAAGCTAAATGCCATCTCGGTTCTTTACTTT
 GATGACAACTCCAATGTCATTCTGAAAAAATACAGGAATATGGTTGTAAGAGCTT
 GTGGATGCCACTAACTCGAAACCAGATGCTGGGGACACACATTCTGCCTTGGATT
 CCTAGATTACATCTGCCTTAAAAAAACACGGAAGCACAGTTGGAGGTGGGACGA
 TGAGACTTTGAAACTATCTCATGCCAGTGCCTTATTACCCAGGAAGATTTTAAAG

GACCTCATTAATAATTTGCTCACTTGGTAAATGACGTGAGTAGTTGTTGGTCTGT
 AGCAAGCTGAGTTTGGATGTCTGTAGCATAAGGTCTGGTAACTGCAGAAACATA
 ACCGTGAAGCTCTTCTACCCTCCTCCCCAAAAACCCACCAAATTAGTTTTAG
 CTGTAGATCAAGCTATTTGGGGTGTGTTGTTAGTAAATAGGGGAAAATAATCTCAAA
 5 GGAGTTAAATGTATTCTTGGCTAAAGGATCAGCTGGTTCAGTACTGTCTATCAAA
 GGTAGATTTTACAGAGAACAGAAATCGGGGAAGTGGGGGGAACGCCTCTGTTCA
 GTTCATTCCCAGAAGTCCACAGGACGCACAGCCCAGGCCACAGCCAGGGCTCCA
 CGGGGCGCCCTTGTCTCAGTCATTGCTGTTGTATGTTTCGTGCTGGAGTTTTGTTGG
 TGTGAAAATACACTTATTTTACGCCAAAACATAACCATTTCTACACCTCAATCCTCC
 10 ATTTGCTGTACTCTTTGCTAGTACCAAAAGTAGACTGATTACACTGAGGTGAGGC
 TACAAGGGGTGTGTAACCGTGTAAACACGTGAAGGCAGTGCTCACCTCTTCTTTAC
 CAGAACGGTTCTTTGACCAGCACATTAACCTTCTGGACTGCCGGCTCTAGTACCTT
 TTCAGTAAAGTGGTTCTCTGCCTTTTTACTATACAGCATACCACGCCACAGGGTT
 AGAACCAACGAAGAAAATAAAATGAGGGTGCCAGCTTATAAGAATGGTGTTAG
 15 GGGGATGAGCATGCTGTTTATGAACGGAAATCATGATTTCCCTGTAGAAAGTGA
 GGCTCAGATTAAATTTTAGAATATTTTCTAAATGCTTTTTTCAACAATCATGTGACT
 GGAAGGCAATTTTATACTAAACTGATTAAATAATACATTTATAATCTACAACCTG
 TTTGCACTTACAGCTTTTTTTGTAAATATAAACTATAATTTATTGTCTATTTTATAT
 CTGTTTTGCTGTGGCGTTGGGGGGGGGGGCCGGGCTTTTGGGGGGGGGGGTTTGT
 20 TGGGGGGTGTCTGTTGGTGTGGGCGGGCGG

SEQ ID NO: 8

>285478CA2

GCCAGCCCTGCCTGCCACCAGGAGGATGAAGGTCTCCGTGGCTGCCCTCTCCTG
 25 CCTCATGCTTGTACTGCCCTTGGATCCCAGGCCCGGGTCACAAAAGATGCAGAG
 ACAGAGTTCATGATGTCAAAGCTTCCATTGGAAAATCCAGTACTTCTGGACATGC
 TCTGGAGGAGAAAGATTGGTCCTCAGATGACCCTTTCTCATGCTGCAGGATTCCA
 TGCTACTAGTGCTGACTGCTGCATCTCCTACACCCACGAAGCATCCCGTGTTCA
 CTCCTGGAGAGTTACTTTGAAACGAACAGCGAGTGCTCCAAGCCGGGTGTCATCT
 30 TCCTACCAAGAAGGGGCGACGTTTCTGTGCCAACCCAGTGATAAGCAAGTTCA
 GGTTCATGAGAATGCTGAAGCTGGACACACGGATCAAGACCAGGAAGAATTG
 AACTTGTCAAGGTGAAGGGACACAAGTTGCCAGCCACCAACTTTCTTGCCTCAAC
 TACCTTCCTGAATTATTTTTTTAAGAAGCATTATTCTTGTGTTCTGGATTTAGAG
 CAATTCATCTAATAAACAGTTTC

35

SEQ ID NO: 9

>gi|1764967|gb|AA181500.1|AA181500 zp16h08.r1 Stratagene fetal retina 937202 Homo
 sapiens cDNA clone IMAGE:609663 5' similar to gb:A12297 CAMP-DEPENDENT
 PROTEIN KINASE TYPE II-BETA REGULATORY CHAIN (HUMAN);

40 CTAGTATGNGTTTTACTTATTCAGACTGATAATCATATTAGTGACTATCCCCATGT
 AAGAGGGCACTTGGCAATTAAACATGCTACACAGCATGGCATCACTTTTTTTTAT
 AACTCATTAAACACAGTAAAATTTTAATCATTTTTTGTGTTTAAAGTTTTCTAGCTTG
 ATAAGTTATGTGCTGGCCTTGCTANTTGGTGAAATGGTATAAAATATCATATGC
 AGTTTTTAAACTTTTTATATTTTTTGAATAAAGTACATTTTGACTTTGTTGGCATA
 45 ATGTCAGTAACATACATATTCAGTGGTTTTATGGACAGGCAATTTAGTCATTAT
 GATAATAAGGAAAACAGTGTTTTAGATGAGAGATCNTTAATGNNTTTTTCCCCCA
 TCCAGCCATATANCCCGCCTTTTTTTAATTTGCCAATCCCCGGTATTCCCATGGCC
 TTTAAAAAATTGGNCNTGGACCATTTAAAGGGCCCCAAGTTTTGGTTTTT

SEQ ID NO: 10

>gi|2177843|gb|AA455067.1|AA455067 aa04c11.s1 Soares_NhHMPu_S1 Homo sapiens
cDNA clone IMAGE:812276 3' similar to gb:L08850 SYNUCLEIN (HUMAN);

5 GCAATGAGATAACGTTTTATTTTAATTCTCACCATTATATACAAACACAAGTGA
ATAAAACACATCGCAAAATGGTAAATTTTCATATTTAGTATTTATAGGTGCATAG
TTTCATGCTCACATATTTTTGAGTATTATATATATTAACAAATTTACAAATACGTC
ATTATTCTTAGACAGTATCATTAAAAGACACCTAAAAATCTTATAATATATGATA
GCAAATCACTAACAACCTTCTGAACAACAGCAACAAAAAATAGTGAGGATTTAG
10 AAATAAGTGGTAGTCACTTAGGTGTTTTTAATTTGTTTTAACATCGTAGATTGAA
GCCACAAAATCCACAGCACACAAAGACCCTGCTACCATGTATTCACCTCAGTGAA
AGGGAAGCACCGAAATGCTGAGTGGGGGCAGGTACAGATACATCAATCACTGCT
GATGGAAGACTTCGAGATACAC

SEQ ID NO: 11

15 >gi|338201|gb|K01918.1|HUMSISA1 Human c-sis proto-oncogene for platelet-derived
growth factor, exon 1 and flanks

GAATTCATGCCGGGCCAGCCGAGCGCGCAGCGGGCACGCCGCGCGCGCGGAGC
AGCCGTGCCCGCCGCCCGGGCCCGCCGAGGGCGCACACGCTCCCGCCCCCT
ACCCGGCCCGGGCGGGAGTTTGCACCTCTCCCTGCCCGGGTGCTCGAGCTGCCGT
20 TGCAAAGCCAACTTTGGAAAAAGTTTTTTGGGGGAGACTTGGGCCTTGAGGTGCC
CAGCTCCGCGCTTTCCGATTTTGGGGGCCTTCCAGAAAATGTTGAAAAAAGCT
AAGCCGGCGGGCAGAGGAAAACGCCTGTAGCCGGCGAGTGAAGACGAACCATC
GACTGCCGTGTTCCCTTTTCCCTCTTGAGGTTGGAGTCCCCTGGGCGCCCCACAC
GGCTAGACGCCTCGGCTGGTTCGCGACGCAGCCCCCGGCCGTGGATGCTGCACT
25 CGGGCTCGGGATCCGCCAGGTAGCCGGCCTCGGACCCAGGTCTGCGCCCAGG
TCCTCCCCTGCCCCCAGCGACGGAGCCGGGGCGGGGGCGGCGGCGCCGGGGG
CATGCGGGTGAGCCGCGGCTGCAGAGGCCTGAGCGCCTGATCGCCGCGGACCCG
AGCCGAGCCCACCCCCCTCCCCAGCCCCCACCCTGGCCGCGGGGGCGGCGCGC
TCGATCTACGCGTTCGGGGCCCCCGCGGGGCGGGGCCCGGAGTCGGCATGAATCG
30 CTGCTGGGCGCTCTTCCCTGTCTCTCTGCTGCTACCTGCGTCTGGTCAGCGCCGAGG
TGAGTGCCACGGCGGCTGGGGCTGGTTCTTCATTACCTTCGCCCCCCCCCTTC
TGACCGCCCCCTCCTCTCCCTGCAGTGAACCTTTGGACCCTTGACCCGCGAGCCT
GACGCCGGGCGCTGGGTGACCTCTTCGGGCTGGGAGCGAGGTCCGGGGGTGACA
GGCTCTAAGGGAAGGCAACAGCGGTGGCTTTCTTTCCAACCGGCGGGCGAATCT
35 GGCTCCCTAAGCCGTTCCTGTTCGGGGGAGGGTGTGTGTGGCCCTGTCCCCACC
CTTTGGGAACCCGAGAACAAAGCCCTCCCGGCCGGGGGAGAGGGGGTGGGGTGG
TGCCAGGGTGCAAGGCAGCGCTCCTCCCGAGCCCACTTCGGCGCCAGCCT
CGGCTTAGGCTCTGTCCTGCCATCGGCTTGCCAGGAGGTGCAAGCTT

40 SEQ ID NO: 12

>938765H1

GCTGCACCGTGAGCGCCGAGGACAAGGCGGCGGCCGAGCGCTCTAAGATGATCG
ACAAGAACCTGCGGGAGGACGGAGAGAAGGCGGCGGGAGGTGAAGTTGCTG
CTGTTGGGTGCTGGGGAGTCAGGGAAGAGCACCATCGTCAAGCAGGTGTAGGTC
45 ATTCCCGGGGGTTGCTTATTCGGGGGGGATTCCCGCAGTACGCGCGGTTGTCTA
CAGCAACAACATCCAGTCCATCATGGCCATTGTCAAAGCCATGGGCAACCTGCA
GATCGACTTTGCCGACCCCT

SEQ ID NO: 13

>gi|1219067|gb|N66942.1|N66942 za48c12.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:295798 3'

AAGACAGAGTGGACTGTTACAAATGATTTTGC AAAATACAAAATAGATATACT
TCCACTGAATGCTTTAATCATTTTTCCGGGCACTCTCATCTTTTGGTTCTTCCTCAT
5 CTGAGTACACAGTGGGCTCCTCCCCCTCCTTCAGCAGTTTGCCCACGTGATGATA
CTTGAAAGTGAACTGAGACTCCCAGTCACTCAGAGTCTCCTGCTGGGCAGCAGTG
AGGTCAGAAAGGTCATCGTACTCATCCTTCAGTGCTTCCTTATCCAGGCAAAATG
TGGCAAGGCCCTGGATGCATCTCTTCCAGCAAAGACCCCATACGGCCCCTCTTTC
AAAAACAAAACCAAAGATCAATTCTTTATTAGACAGTCAATTTCTCTGTGATTTA
10 TACACAGAAAATGGGCTTCCCTANT

SEQ ID NO: 14

>gi|190825|gb|M29871.1|HUMRACB Human ras-related C3 botulinum toxin substrate (rac) mRNA, complete cds

15 ATGCAGGCCATCAAGTGTGTGGTGGTGGGAGATGGGGCCGTGGGGCAAGACCTGC
CTTCTCATCAGCTACACCACCAACGCCTTTCCCGGAGAGTACATCCCCACCGTGT
TTGACAACCTATTTCAGCCAATGTGATGGTGGACAGCAAGCCAGTGAACCTGGGGC
TGTGGGACACTGCTGGGCAGGAGGACTACGACCGTCTCCGGCCGCTCTCCTATCC
ACAGACGGACGTCTTCCTCATCTGCTTCTCCCTCGTCAGCCCAGCCTCTTATGAGA
20 ACGTCCGCGCCAAGTGGTTCCCAGAAAGTGCGGCACCACTGCCCCAGCACACCCA
TCATCCTGGTGGGCACCAAGCTGGACCTGCGGGACGACAAGGACACCATCGAGA
AACTGAAGGAGAAGAAGCTGGCTCCCATCACCTACCCGCAGGGCCTGGCACTGG
CCAAGGAGATTGACTCGGTGAAATACCTGGAGTGCTCAGCCCTCACCCAGAGAG
GCCTGAAAACCGTGTTTCGACGAGGCCATCCGGGCCGTGCTGTGCCCTCAGCCAC
25 GCGGCAGCAGAAGCGCGCCTGCAGCCTCCTCTAG

SEQ ID NO: 15

>gi|1551654|gb|AA058828.1|AA058828 zf66f10.s1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:381931 3' similar to contains element MER36 repetitive element ;

30 GTGTTTTTGGAAAGTTTATTATATGAAGATGGTATACAAAATACATTCATCATGAC
TAGAAATATAGGACCAAACCATGTCTGTCTTATATCTGTAGCATATATTCTTGTT
TGTATAAAAGTAACTTTAAAATTCCAGTTTCCTTAAATAGTTATGCACAAAACAC
ACATACACCCACACACACACACACACACACACATACAGTTACACCACT
GTCGGCCAAAGATGCACTCCTCCTTTAATCAATTTAAATGAGGCTAGCGAGTATC
35 TGTTTGATGTTTGCATTCTTGTGGGCTAGGAAACAAGGCACGGGTCCCTAAAATT
AACATCTCGGTGTCACTTCTTGGACTGACAAGACACAGACTTGCACATGGTTTCA
GCCCCATTCCACCCAGACTGTTCCACGTACATTATCTCAGAACTCTGAAAGGAA
GTGCTCGTTCTTTGTAGTGCCAACCATTTTTGTCATAAATGGCAAATGATTGGGA
TATTATCAGTTAATTCATGTTTCAATTTCAAGTGCTATTTTAATGGACAAGCACTTG
40 TAACTAGCCCATATTACAAGTCTCCATTTTTTCCACATTAANCTCCNGAGGGAC
CATCTTTGGCCGATGGAGG

SEQ ID NO: 16

>gi|1010559|gb|H57727.1|H57727 yr21b09.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205913 3'

45 GTTGGGGGAGGACGGGTTGCCGACTCGCCTACCTAGCGGTCTCTTGATTGTCGAC
ATTTTGTGTCATAGGTTTATGTAGAGACGTATACATATATATAGACACACTGTC
TATAAATCTAGGCCTGTATCCGGTGTCCGAGGCGAACTCAGTAAGATGATGTAA
GAGGAAACCTGAAGCAAGTGCGCATTGAGAAAAACCCGGCCCGCCTTCGCGCCC

TGGAGTCCGCGGTGGGCGAGACGAGCCGGCGCCCGNCNAGCCATTGGCGCTCGC
TCTTGCCGGGGAGCCANCNCGCCCGCGCCCGGCCTCCAGAGGACCACCCGGACG
AGGAGATGGGGTTCATATCGACATCAAGAGTTTNCCTCAAGCCGGGCG

5 SEQ ID NO: 17

>gi|598152|gb|L36148.1|HUMGPR4A Homo sapiens G protein-coupled receptor (GPR4)
gene, complete cds

ATAATTCCATCCCTCCTCCAACCTTTTCCCTCTCAAGCTCTGCCCTTCCCAGCCCAG
CCCAGCCTACCCAACCTCATCTCTTCCCTGTAGACCACATCCCACCATGTTCCCCT
10 GAGCCTCCAAGGAAGGGGCTCAGGGGCCCCATGGCCTCCCGCTCCCTGTGGCCC
CACAGCCCCCGTGGGCCAGGGGAAGCGCCCCAGAAGCCGAAGTGCCACCATGG
GCAACCACACGTGGGAGGGCTGCCACGTGGACTCGCGCGTGGACCACCTCTTTCC
GCCATCCCTCTACATCTTTGTATCGGCGTGGGGCTGCCACCAACTGCCTGGCT
CTGTGGGCGGCCTACCGCCAGGTGCAACAGCGCAACGAGCTGGGCGTCTACCTG
15 ATGAACCTCAGCATCGCCGACCTGCTGTACATCTGCACGCTGCCGCTGTGGGTGG
ACTACTTCCTGCACCACGACAACCTGGATCCACGGCCCCGGGTCTGCAAGCTCTT
TGGGTTTCATCTTCTACACCAATATCTACATCAGCATCGCCTTCCTGTGCTGCATCT
CGGTGGACCGCTACCTGGCTGTGGCCACCCACTCCGCTTCGCCCCGCTGCGCCG
CGTCAAGACCGCCGTGGCCGTGAGCTCCGTGGTCTGGGCCACGGAGCTGGGCGC
20 CAACTCGGCGCCCCTGTTCCATGACGAGCTCTTCCGAGACCGCTACAACCACACC
TTCTGCTTTGAGAAGTTCCCCATGGAAGGCTGGGTGGCCTGGATGAACCTCTATC
GGGTGTTCTGTGGGCTTCCTCTTCCCGTGGGCGCTCATGCTGCTGTGCTACCGGGG
CATCCTGCGGGCCGTGCGGGGCGAGCGTGTCCACCGAGCGCCAGGAGAAGGCCAA
GATCAAGCGGCTGGCCCTCAGCCTCATCGCCATCGTGCTGGTCTGCTTTGCGCCC
25 TATCACGTGCTCTTGCTGTCCCGCAGCGCCATCTACCTGGGCCGCCCTGGGACT
GCGGCTTCGAGGAGCGCGTCTTTTCTGCATACCACAGCTCACTGGCTTTCACCAG
CCTCAACTGTGTGGCGGACCCCATCCTCTACTGCCTGGTCAACGAGGGCGCCCCG
AGCGATGTGGCCAAGGCCCTGCACAACCTGCTCCGCTTCTGGCCAGCGACAAGC
CCCAGGAGATGGCCAATGCCTCGCTCACCTGGAGACCCCACTCACCTCCAAGA
30 GGAACAGCACAGCCAAAGCCATGACTGGCAGCTGGGCGGCCACTCCGCTCCCA
GGGGGACCAGGTGCAGCTGAAGATGCTGCCGCCAGCACAATGAACCCCGAGTGG
CACAGAATCCCCAGTTTTCCCTCTCATCCACAGTCCCTTCTCTCCTGG

SEQ ID NO: 18

35 >gi|339569|gb|M85079.1|HUMTGFBIIIR Human TGF-beta type II receptor mRNA, complete
cds

GTTGGCGAGGAGTTTCTGTTTCCCCCGCAGCGCTGAGTTGAAGTTGAGTGAGTC
ACTCGCGCGCACGGAGCGACGACACCCCCGCGCGTGCACCCGCTCGGGACAGGA
GCCGGAATCCTGTGCAGCTTCCCTCGGCCGCCGGGGGCTCCCCGCGCCTCGCCG
40 GCCTCCAGGCCCCCTCCTGGCTGGCGAGCGGGCGCCACATCTGGCCCGCACATCTG
CGCTGCCGGCCCCGGCGCGGGGTCCGGAGAGGGCGCGGCGCGGAGCGCAGCCAG
GGGTCCGGGAAGGCGCCGTCCGTGCGCTGGGGGCTCGGTCTATGACGAGCAGCG
GGGTCTGCCATGGGTGCGGGGGCTGCTCAGGGGCTGTGGCCGCTGCACATCGTCC
TGTGGACGCGTATCGCCAGCACGATCCACCGCACGTTTCAAGTTCGGTTAATAA
45 CGACATGATAGTCACTGACAACAACGGTGCAAGTTCACAACTGTGTAA
ATTTTGTGATGTGAGATTTTCCACCTGTGACAACCAGAAATCCTGCATGAGCAAC
TGCAGCATCACCTCCATCTGTGAGAAGCCACAGGAAGTCTGTGTGGCTGTATGGA
GAAAGAATGACGAGAACATAACACTAGAGACAGTTTGCCATGACCCCAAGCTCC
CCTACCATGACTTTATTCTGGAAGATGCTGCTTCTCCAAAGTGCAATTATGAAGGA

AAAAAAAAAAGCCTGGTGAGACTTTCTTCATGTGTTCCCTGTAGCTCTGATGAGTGC
 AATGACAACATCATCTTCTCAGAAGAATATAACACCAGCAATCCTGACTTGTTGC
 TAGTCATATTTCAAGTGACAGGCATCAGCCTCCTGCCACCACTGGGAGTTGCCAT
 ATCTGTCATCATCATCTTCTACTGCTACCGCGTTAACCGGCAGCAGAAGCTGAGT
 5 TCAACCTGGGAAACCGGCAAGACGCGGAAGCTCATGGAGTTCAGCGAGCACTGT
 GCCATCATCCTGGAAGATGACCGCTCTGACATCAGCTCCACGTGTGCCAACAACA
 TCAACCACAACACAGAGCTGCTGCCCATTGAGCTGGACACCCTGGTGGGGAAAG
 GTCGCTTTGCTGAGGTCTATAAGGCCAAGCTGAAGCAGAACACTTCAGAGCAGTT
 TGAGACAGTGGCAGTCAAGATCTTTCCCTATGAGGAGTATGCCTCTTGGAAGACA
 10 GAGAAGGACATCTTCTCAGACATCAATCTGAAGCATGAGAACATACTCCAGTTCC
 TGACGGCTGAGGAGCGGAAGACGGAGTTGGGGAAACAATACTGGCTGATCACCG
 CCTTCCACGCCAAGGGCAACCTACAGGAGTACCTGACGCGGCATGTCATCAGCT
 GGGAGGACCTGCGCAAGCTGGGCAGCTCCCTCGCCCGGGGGATTGCTCACCTCC
 ACAGTGATCACACTCCATGTGGGAGGCCCAAGATGCCCATCGTGCACAGGGACC
 15 TCAAGAGCTCCAATATCCTCGTGAAGAACGACCTAACCTGCTGCCTGTGTGACTT
 TGGGCTTTCCCTGCGTCTGGACCCTACTCTGTCTGTGGATGACCTGGCTAACAGT
 GGGCAGGTGGGAAGTCAAGATAACATGGCTCCAGAAGTCCTAGAATCCAGGATG
 AATTTGGAGAATGCTGAGTCCTTCAAGCAGACCGATGTCTACTCCATGGCTCTGG
 TGCTCTGGGAAATGACATCTCGCTGTAATGCAGTGGGAGAAGTAAAAGATTATG
 20 AGCCTCCATTTGGTTCCAAGGTGCGGGAGCACCCCTGTGTGCGAAAGCATGAAGG
 ACAACGTGTTGAGAGATCGAGGGGCGACCAGAAATTCCCAGCTTCTGGCTCAACC
 ACCAGGGCATCCAGATGGTGTGTGAGACGTTGACTGAGTGCTGGGACCACGACC
 CAGAGGGCCCGTCTCACAGCCCAGTGTGTGGCAGAACGCTTCAGTGAGCTGGAGC
 ATCTGGACAGGCTCTCGGGGAGGAGCTGCTCGGAGGAGAAGATTCTGAAGACG
 25 GCTCCCTAAACACTACCAAATAGCTCTTATGGGGCAGGCTGGGCATGTCCAAAG
 AGGCTGCCCCTCTCACCAA

SEQ ID NO: 19

>gi|37464|emb|X14787.1|HSTS Human mRNA for thrombospondin

30 GGACGCACAGGCATTCCCCGCGCCCCCTCCAGCCCTCGCCGCCCTCGCCACCGCTC
 CCGGCCGCGCGCTCCGGTACACACAGGATCCCTGCTGGGCACCAACAGCTCCA
 CCATGGGGCTGGCCTGGGGACTAGGCGTCCTGTTCCCTGATGCATGTGTGTGGCAC
 CAACCGCATTCCAGAGTCTGGCGGAGACAACAGCGTGTTTGACATCTTTGAACTC
 ACCGGGGCCGCCCCGCAAGGGGTCTGGGCGCCGACTGGTGAAGGGCCCCGACCCT
 35 TCCAGCCCAGCTTTCCGCATCGAGGATGCCAACCTGATCCCCCTGTGCCTGATG
 ACAAGTTCCAAGACCTGGTGGATGCTGTGCGGGCAGAAAAGGGTTTCCTCCTTCT
 GGCATCCCTGAGGCAGATGAAGAAGACCCGGGGCAGCTGCTGGCCCTGGAGCG
 GAAAGACCACTCTGGCCAGGTCTTCAGCGTGGTGTCCAATGGCAAGGCGGGCAC
 CCTGGACCTCAGCCTGACCGTCCAAGGAAAGCAGCACGTGGTGTCTGTGGAAGA
 40 AGCTCTCCTGGCAACCGGCCAGTGGAAGAGCATCACCTGTTTGTGCAGGAAGA
 CAGGGCCCAGCTGTACATCGACTGTGAAAAGATGGAGAATGCTGAGTTGGACGT
 CCCATCCAAAGCGTCTTCACCAGAGACCTGGCCAGCATCGCCAGACTCCGCATC
 GCAAAGGGGGGCGTCAATGACAATTTCCAGGGGGTGCTGCAGAATGTGAGGTTT
 GTCTTTGGAACCACACCAGAAGACATCCTCAGGAACAAAGGCTGCTCCAGCTCT
 45 ACCAGTGTCTCCTCACCCTTGACAACAACGTGGTGAATGGTTCCAGCCCTGCCA
 TCCGCACTAACTACATTGGCCACAAGACAAAGGACTTGCAAGCCATCTGCGGCA
 TCTCCTGTGATGAGCTGTCCAGCATGGTCTGGAAGTCAAGGGCCTGCGCACCAT
 TGTGACCACGCTGCAGGACAGCATCCGCAAAGTGACTGAAGAGAACAAAGAGTT
 GGCCAATGAGCTGAGGCGGCCTCCCCTATGCTATCACAACGGAGTTCAGTACAG

AAATAACGAGGAATGGACTGTTGATAGCTGCACTGAGTGTCAGTGTGCTGTCAGAACTC
AGTTACCATCTGCAAAAAGGTGTCTGCCCCATCATGCCCTGCTCCAATGCCACA
GTTCTGATGGAGAATGCTGTCCTCGCTGTTGGCCCAGCGACTCTGCGGACGATG
GCTGGTCTCCATGGTCCGAGTGGACCTCCTGTTCTACGAGCTGTGGCAATGGAAT
5 TCAGCAGCGCGGCCGCTCCTGCGATAGCCTCAACAACCGATGTGAGGGCTCCTCG
GTCCAGACACGGACCTGCCACATTCAGGAGTGTGACAAAAGATTTAAACAGGAT
GGTGGCTGGAGCCACTGGTCCCCGTGGTCATCTTGTTCTGTGACATGTGGTGATG
GTGTGATCACAAGGATCCGGCTCTGCAACTCTCCCAGCCCCCAGATGAATGGGA
AACCTGTGAAGGCGAAGCGCGGGAGACCAAAGCCTGCAAGAAAGACGCCTGC
10 CCCATCAATGGAGGCTGGGGTCTTGGTCACCATGGGACATCTGTTCTGTACCT
GTGGAGGAGGGGTACAGAAACGTAGTCGTCTCTGCAACAACCCCGCACCCAGT
TTGGAGGCAAGGACTGCGTTGGTGATGTAACAGAAAACAGATCTGCAACAAGC
AGGACTGTCCAATTGATGGATGCCTGTCCAATCCCTGCTTTGCCGGCGTGAAGTG
TACTAGCTACCCTGATGGCAGCTGGAAATGTGGTGCTTGTCCTCCCTGGTTACAGT
15 GGAAATGGCATCCAGTGACAGATGTTGATGAGTGCAAAGAAGTGCCTGATGCC
TGCTTCAACCACAATGGAGAGCACCGGTGTGAGAACACGGACCCCGGCTACAAC
TGCCTGCCCTGCCCCCACGCTTCACCGGCTCACAGCCCTTCGGCCAGGGTGTGCG
AACATGCCACGGCCAACAACAGGTGTGCAAGCCCCGTAACCCCTGCACGGATG
GGACCCACGACTGCAACAAGAACGCCAAGTGCAACTACCTGGGCCACTATAGCG
20 ACCCCATGTACCGCTGCGAGTGCAAGCCTGGCTACGCTGGCAATGGCATCATCTG
CGGGGAGGACACAGACCTGGATGGCTGGCCCAATGAGAACCTGGTGTGCGTGCC
CAATGCGACTTACCACTGCAAAAAGGATAATTGCCCAACCTTCCCAACTCAGGG
CAGGAAGACTATGACAAGGATGGAATTGGTGATGCCTGTGATGATGACGATGAC
AATGATAAAATTCCAGATGACAGGGACAACGTGTCATTCCATTACAACCCAGCTC
25 AGTATGACTATGACAGAGATGATGTGGGAGACCGCTGTGACAACCTGTCCCTACA
ACCACAACCCAGATCAGGCAGACACAGACAACAATGGGGAAGGAGACGCCTGT
GCTGCAGACATTGATGGAGACGGTATCCTCAATGAACGGGACAACCTGCCAGTAC
GTCTACAATGTGGACCAGAGAGACACTGATATGGATGGGGTTGGAGATCAGTGT
GACAATTGCCCTTGGAACACAATCCGGATCAGCTGGACTCTGACTCAGACCGCA
30 TTGGAGATACCTGTGACAACAATCAGGATATTGATGAAGATGGCCACCAGAACA
ATCTGGACAACCTGTCCCTATGTGCCCAATGCCAACCAGGCTGACCATGACAAAG
ATGGCAAGGGAGATGCCTGTGACCACGATGATGACAACGATGGCATTCTCTGATG
ACAAGGACAACCTGCAGACTCGTGCCCAATCCCGACCAGAAGGACTCTGACGGCG
ATGGTCGAGGTGATGCCTGCAAAGATGATTTTGACCATGACAGTGTGCCAGACAT
35 CGATGACATCTGTCTGAGAATGTTGACATCAGTGAGACCGATTTCGCGCGATT
CAGATGATTCTCTGGACCCCAAAGGGACATCCCAAAATGACCCTAACTGGGTG
TACGCCATCAGGGTAAAGAACTCGTCCAGACTGTCAACTGTGATCCTGGACTCGC
TGTAGGTTATGATGAGTTTAATGCTGTGGACTTCAGTGGCACCTTCTTCATCAAC
ACCGAAAGGGACGATGACTATGCTGGATTTGTCTTTGGCTACCAGTCCAGCAGCC
40 GCTTTTATGTTGTGATGTGGAAGCAAGTCACCCAGTCCTACTGGGACACCAACCC
CACGAGGGCTCAGGGATACTCGGGCCTTTCTGTGAAAGTTGTAAACTCCACCACA
GGGCCTGGCGAGCACCTGCGGAACGCCCTGTGGCACACAGGAAACACCCCTGGC
CAGGTGCGCACCTGTGGCATGACCCTCGTCACATAGGCTGGAAAGATTTACCCG
CCTACAGATGGCGTCTCAGCCACAGGCCAAAGACGGGTTTCATTAGAGTGGTGA
45 TGTATGAAGGGAAGAAAATCATGGCTGACTCAGGACCCATCTATGATAAAACCT
ATGCTGGTGGTAGACTAGGGTTGTTTGTCTTCTCTCAAGAAATGGTGTCTTCTCT
GACCTGAAATACGAATGTAGAGATCCCTAATCATCAAATTGTTGATTGAAAGACT
GATCATAAACCAATGCTGGTATTGCACCTTCTGGAACCTATGGGCTTGAGAAAACC
CCCAGGATCACTTCTCCTTGGCTTCTTCTTTCTGTGCTTGCATCAGTGTGGACT

CCTAGAACGTGCGACCTGCCTCAAGAAAATGCAGTTTTCAAAAACAGACTCATC
 AGCATTACGCCTCCAATGAATAAGACATCTTCCAAGCATATAAACAATTGCTTTG
 GTTTCCTTTTGA AAAAAGCATCTACTTGCTTCAGTTGGGAAGGTGCCCATTCCTC
 TGCCTTTGTACAGAGCAGGGTGCTATTGTGAGGCCATCTCTGAGCAGTGGACTC
 5 AAAAGCATTTCAGGCATGTCAGAGAAGGGAGGACTCACTAGAATTAGCAAACA
 AAACCACCCTGACATCCTCCTTCAGGAACACGGGGAGCAGAGGCCAAAGCACTA
 AGGGGAGGGCGCATACCCGAGACGATTGTATGAAGAAAATATGGAGGAACTGTT
 ACATGTTCTGGTACTAAGTCATTTTCAGGGGATTGAAAGACTATTGCTGGATTTC
 TGATGCTGACTGGCGTTAGCTGATTAACCCATGTAAATAGGCACTTAAATAGAAG
 10 CAGGAAAGGGAGACAAAGACTGGCTTCTGGACTTCCTCCCTGATCCCCACCCTTA
 CTCATCACCTTGCAGTGGCCAGAATTAGGGAATCAGAATCAAACCAGTGTAAGG
 CAGTGCTGGCTGCCATTGCCTGGTCACATTGAAATTGGTGGCTTCATTCTAGATG
 TAGCTTGTGCAGATGTAGCAGGAAAATAGGAAAACCTACCATCTCAGTGAGCAC
 CAGCTGCCTCCCAAAGGAGGGGCAGCCGTGCTTATATTTTTATGGTTACAATGGC
 15 ACAAATATTATCAACCTAACTAAAACATTCCCTTTTCTCTTTTTTCCGTAATTAC
 TAGGTAGTTTTCTAATTCTCTCTTTTGGGAAGTATGATTTTTTTAAAGTCTTTACGAT
 GTAAAATATTTATTTTTTACTTATTCTGGAAGATCTGGCTGAAGGATTATTCATGG
 AACAGGAAGAAGCGTAAAGACTATCCATGTCATCTTTGTTGAGAGTCTTCGTGAC
 TGTAAGATTGTAAATACAGATTATTTATTAACCTCTGTTCTGCCTGGAAATTTAGGC
 20 TTCATACGGAAAGTGTTTGAGAGCAAGTAGTTGACATTTATCAGCAAATCTCTTG
 CAAGAACAGCACAAGGAAAATCAGTCTAATAAGCTGCTCTGCCCCCTGTGCTCA
 GAGTGGATGTTATGGGATTCCTTTTTTCTCTGTTTTATCTTTTCAAGTGAATTAG
 TTGGTTATCCATTTGCAAATGTTTTAAATTGCAAAGAAAGCCATGAGGTCTTCAA
 TACTGTTTTACCCCATCCCTTGTGCATATTTCCAGGGAGAAGGAAAGCATATACA
 25 CTTTTTCTTTTCATTTTTTCCAAAAGAGAAAAAAATGACAAAAGGTGAAACTTACA
 TACAAATATTACCTCATTTGTTGTGTGACTGAGTAAAGAATTTTTGGATCAAGCG
 GAAAGAGTTTAAGTGTCTAACAACCTTAAAGCTACTGTAGTACCTAAAAAGTCA
 GTGTTGTACATAGCATAAAAACCTCTGCAGAGAAGTATTCCCAATAAGGAAATAG
 CATTGAAATGTTAAATACAATTTCTGAAAGTTATGTTTTTTTTCTATCATCTGGTA
 30 TACCATTGCTTTATTTTTATAAATTATTTCTCATTGCCATTGGAATAGAATATTC
 AGATTGTGTAGATATGCTATTTAAATAATTTATCAGGAAATACTGCCTGTAGAGT
 TAGTATTTCTATTTTTATATAATGTTTGCACACTGAATTGAAGAATTGTTGGTTTT
 TTCTTTTTTTTGTTTTTTTTTTTTTTTTTTTTTTTGTCTTTGACCTCCCATTTTTA
 CTATTTGCCAATACCTTTTTCTAGGAATGTGCTTTTTTTGTACACATTTTATCCA
 35 TTTTACATTCTAAAGCAGTGTAAGTTGTATATTACTGTTTCTTATGTACAAGGAAC
 AACAATAAATCATATGGAAATTTATATTT

SEQ ID NO: 20

>gi|2229167|gb|AA495846.1|AA495846 zw05a06.r1 Soares_NhHMPu_S1 Homo sapiens

40 cDNA clone IMAGE:768370 5'

TGAACATATTCATTGTTTGTTTATTAATAAATTACCATTTCAGTTTGAATGAGACCT
 ATATGTCTGGATACTTTAATAGAGCTTTAATTATTACGAAAAAAGATTTTCAGAGA
 TAAAACACTAGAAGTTACCTATTCTCCACCTAAATCTCTGAAAAATGGAGAAACC
 CTCTGACTAGTCCATGTCAAATTTTACTAAAAGTCTTTTTGTTTAGATTTATTTTCC
 45 TGCAGCATCTTCTGCAAATGTACTATATAGTCAGCTTGCTTTGAGGCTAGTAAA
 AAGATATTTTTCTAAACAGATTGGAGTTGGCATATAAACAAATACGTTTTCTCAC
 TAATGACAGTCCATG

SEQ ID NO: 21

>gi|2459627|gb|U88880.1|HSU88880 Homo sapiens Toll-like receptor 4 (TLR4) mRNA,
complete cds

5 ACAGGGCCACTGCTGCTCACAGAAGCAGTGAGGATGATGCCAGGATGATGTCTG
CCTCGCGCCTGGCTGGGACTCTGATCCCAGCCATGGCCTTCCTCTCCTGCGTGAG
ACCAGAAAGCTGGGAGCCCTGCGTGAGACTTGGCCCTAAACCACACAGAAGAG
CTGGCATGAAACCCAGAGCTTTCAGACTCCGGAGCCTCAGCCCTTCACCCCGATT
CCATTGCTTCTTGCTAAATGCTGCCGTTTTATCACGGAGGTGGTTCCTAATATTAC
TTATCAATGCATGGAGCTGAATTTCTACAAAATCCCCGACAACCTCCCCTTCTCA
10 ACCAAGAACCTGGACCTGAGCTTTAATCCCCTGAGGCATTTAGGCAGCTATAGCT
TCTTCAGTTTCCCAGAACTGCAGGTGCTGGATTTATCCAGGTGTGAAATCCAGAC
AATTGAAGATGGGGCATATCAGAGCCTAAGCCACCTCTCTACCTTAATATTGACA
GGAAACCCCATCCAGAGTTTAGCCCTGGGAGCCTTTTCTGGACTATCAAGTTTAC
AGAAGCTGGTGGCTGTGGAGACAAATCTAGCATCTCTAGAGAACTTCCCCATTGG
15 ACATCTCAAAACTTTGAAAGAACTTAATGTGGCTCACAATCTTATCCAATCTTTC
AAATTACCTGAGTATTTTTCTAATCTGACCAATCTAGAGCACTTGGACCTTTCAG
CAACAAGATTCAAAGTATTTATTGCACAGACTTGCGGGTCTACATCAAATGCCC
CTACTCAATCTCTCTTTAGACCTGTCCCTGAACCCTATGAACTTTATCCAACCAGG
TGCATTTAAAGAAATTAGGCTTCATAAGCTGACTTTAAGAAATAATTTTGATAGT
20 TTAAATGTAATGAAAACCTTGATTCAAGGTCTGGCTGGTTTAGAAGTCCATCGTT
TGGTCTGGGAGAATTTAGAAATGAAGGAAACTTGGAAAAGTTTGACAAATCTG
CTCTAGAGGGCCTGTGCAATTTGACCATTGAAGAATTCCGATTAGCATACTTAGA
CTACTACCTCGATGATATTATTGACTTATTTAATTGTTTGACAAATGTTTCTTCAT
TTTCCCTGGTGAGTGTGACTATTGAAAGGGTAAAAGACTTTTCTTATAATTTTCGG
25 ATGGCAACATTTAGAATTAGTTAACTGTAAATTTGGACAGTTTCCCACATTGAAA
CTCAAATCTCTCAAAAGGCTTACTTTCACCTCCAACAAAGGTGGGAATGCTTTTT
CAGAAGTTGATCTACCAAGCCTTGAGTTTCTAGATCTCAGTAGAAATGGCTTGAG
TTTCAAAGGTTGCTGTTCTCAAAGTGATTTTGGGACAACCAGCCTAAAGTATTTA
GATCTGAGCTTCAATGGTGTTATTACCATGAGTTCAAACCTTCTTGGGCTTAGAAC
30 AACTAGAACATCTGGATTTCCAGCATTCCAATTTGAAACAAATGAGTGAGTTTTC
AGTATTCCTATCACTCAGAAACCTCATTTACCTTGACATTTCTCATACTCACACCA
GAGTTGCTTTCAATGGCATCTTCAATGGCTTGTCCAGTCTCGAAGTCTTGAAAAT
GGCTGGCAATTCTTTCCAGGAAAACCTCCTTCCAGATATCTTCACAGAGCTGAGA
AACTTGACCTTCTGGACCTCTCTCAGTGTCAACTGGAGCAGTTGTCTCCAACAG
35 CATTTAACTCACTCTCCAGTCTTCAGGTACTAAATATGAGCCACAACAACCTTCTTT
TCATTGGATACGTTTTCCTTATAAGTGTCTGAACTCCCTCCAGGTCTTGATTACAG
TCTCAATCACATAATGACTTCCAAAAACAGGAACTACAGCATTTTCCAAGTAGT
CTAGCTTTCTTAAATCTTACTCAGAATGACTTTGCTTGTACTTGTGAACACCAGAG
TTTCCTGCAATGGATCAAGGACCAGAGGCAGCTCTTGGTGAAGTTGAACGAAT
40 GGAATGTGCAACACCTTCAGATAAGCAGGGCATGCCTGTGCTGAGTTTGAATATC
ACCTGTCAGATGAATAAGACCATCATTGGTGTGTGCGTCCTCAGTGTGCTTGTAG
TATCTGTTGTAGCAGTTCTGGTCTATAAGTTCTATTTTCACCTGATGCTTCTTGCT
GGCTGCATAAAGTATGGTAGAGGTGAAAACATCTATGATGCCTTTGTTATCTACT
CAAGCCAGGATGAGGACTGGGTAAAGGAATGAGCTAGTAAAGAATTTAGAAGAA
45 GGGGTGCCTCCATTTAGCTCTGCCTTCACTACAGAGACTTTATTCCCGGTGTGGC
CATTGCTGCCAACATCATCCATGAAGGTTTCCATAAAAGCCGAAAGGTGATTGTT
GTGGTGTCCCAGCACTTCATCCAGAGCCGCTGGTGTATCTTTGAATATGAGATTG
CTCAGACCTGGCAGTTTCTGAGCAGTCGTGCTGGTATCATCTTCATTGTCCTGCAG
AAGGTGGAGAAGACCCTGCTCAGGCAGCAGGTGGAGCTGTACCGCCTTCTCAGC

AGGAACACTTACCTGGAGTGGGAGGACAGTGTCTGGGGCGGCACATCTTCTGG
 AGACGACTCAGAAAAGCCCTGCTGGATGGTAAATCATGGAATCCAGAAGGAACA
 GTGGGTACAGGATGCAATTGGCAGGAAGCAACATCTATCTGAAGAGGAAAAATA
 AAAACCTCCTGAGGCATTTCTTGCCAGCTGGGTCCAACACTTGTTCAAGTTAATA
 5 AGTATTAAATGCTGCCACATGTCAGGCCTTATGCTAAGGGTGAGTAATTCCATGG
 TGCCTAGATATGCAGGGCTGCTAATCTCAAGGAGCTTCCAGTGCAGAGGGAAT
 AAATGCTAGACTAAAATACAGAGTCTTCCAGGTGGGCATTTCAACCAACTCAGTC
 AAGGAACCCATGACAAAGAAAGTCATTTCAACTCTTACCTCATCAAGTTGAATAA
 AGACAGAGAAAACAGAAAGAGACATTGTTCTTTTCTGAGTCTTTTGAATGGAA
 10 ATTGTATTATGTTATAGCCATCATAAAACCATTTTGGTAGTTTGGACTGAACTGGG
 TGTTCACTTTTTCTTTTTGATTGAATAACAATTTAAATTCTACTTGATGACTGCAG
 TCGTCAAGGGGCTCCTGATGCAAGATGCCCTTCCATTTTAAGTCTGTCTCCTTAC
 AGAGGTTAAAGTCTAATGGCTAATTCCTAAGGAAACCTGATTAACACATGCTCAC
 AACCATCCTGGTCATTCTCGAACATGTTCTATTTTTTAACTAATCACCCCTGATAT
 15 ATTTTTATTTTTATATATCCAGTTTTTCATTTTTTACGTCTTGCCTATAAGCTAATA
 TCATAAATAAGGTTGTTTAAGACGTGCTTCAAATATCCATATTAACCACTATTTTT
 CAAGGAAGTATGGAAAAGTACACTCTGTCACTTTGTCACTCGATGTCATTCCAAA
 GTTATTGCCTACTAAGTAATGACTGTCATGAAAGCAGCATTGAAATAATTTGTTT
 AAAGGGGGCACTCTTTTAAACGGGAAGAAAATTTCCGCTTCTGGTCTTATCATG
 20 GACAATTTGGGCTATAGGCATGAAGGAAGTGGGATTACCTCAGGAAGTCACCTT
 TTCTTGATTCCAGAAACATATGGGCTGATAAACCCGGGGTGACCTCATGAAATGA
 GTTGCAGCAGATGTTTATTTTTTTCAGAACAAAGTGATGTTTGATGGACCTATGAA
 TCTATTTAGGGAGACACAGATGGCTGGGATCCCTCCCCTGTACCCTTCTCACTGA
 CAGGAGAACTA

25

SEQ ID NO: 22

>gi|189185|gb|M32315.1|HUMNFR Human tumor necrosis factor receptor mRNA, complete
 cds

GCGAGCGCAGCGGAGCCTGGAGAGAAGGCGCTGGGCTGCGAGGGCGCGAGGGC
 30 GCGAGGGCAGGGGGCAACCGGACCCCGCCCGCACCCATGGCGCCCGTCGCCGTC
 TGGGCCGCGCTGGCCGTCGGACTGGAGCTCTGGGCTGCGGCGCACGCCTTGCCCCG
 CCCAGGTGGCATTACACCCTACGCCCCGGAGCCCGGGAGCACATGCCGGCTCA
 GAGAATACTATGACCAGACAGCTCAGATGTGCTGCAGCAAATGCTCGCCGGGCC
 AACATGCAAAAGTCTTCTGTACCAAGACCTCGGACACCGTGTGTGACTCCTGTGA
 35 GGACAGCACATACACCAGCTCTGGAAGTGGGTTCCCGAGTGCTTGAGCTGTGGC
 TCCCGCTGTAGCTCTGACCAGGTGGAACTCAAGCCTGCACTCGGGAACAGAAC
 CGCATCTGCACCTGCAGGCCCGGCTGGTACTGCGCGCTGAGCAAGCAGGAGGGG
 TGCCGGCTGTGCGCGCCGCTGCGCAAGTGCCGCCCGGGCTTCGGCGTGGCCAGA
 CCAGGAAGTGAACATCAGACGTGGTGTGCAAGCCCTGTGCCCCGGGGACGTTT
 40 TCCAACACGACTTCATCCACGATATTTGCAGGCCCCACCAGATCTGTAACGTGG
 TGGCCATCCCTGGGAATGCAAGCATGGATGCAGTCTGCACGTCCACGTCCCCAC
 CCGGAGTATGGCCCCAGGGGCAGTACACTTACCCAGCCAGTGTCCACACGATC
 CCAACACACGCAGCCAACCTCCAGAACCCAGCACTGCTCCAAGCACCTCCTTCTG
 CTCCCAATGGGCCCCAGCCCCCAGCTGAAGGGAGCACTGGCGACTTCGCTCTTC
 45 CAGTTGGACTGATTGTGGGTGTGACAGCCTTGGGTCTACTAATAATAGGAGTGGT
 GAACTGTGTCATCATGACCCAGGTGAAAAAGAAGCCCTTGTGCCTGCAGAGAGA
 AGCCAAGGTGCCTCACTTGCCTGCCGATAAGGCCCGGGGTACACAGGGCCCCGA
 GCAGCAGCACCTGCTGATCACAGCGCCGAGCTCCAGCAGCAGCTCCCTGGAGAG
 CTCGGCCAGTGC GTTGGACAGAAGGGCGCCCACTCGGAACCAAGCCACAGGCACC

AGGCGTGGAGGCCAGTGGGGCCGGGGAGGCCCCGGGCCAGCACCGGGAGCTCAG
ATTCTTCCCCTGGTGGCCATGGGACCCAGGTCAATGTCACCTGCATCGTGAACGT
CTGTAGCAGCTCTGACCACAGCTCACAGTGCTCCTCCCAAGCCAGCTCCACAATG
GGAGACACAGATTCCAGCCCCTCGGAGTCCCCGAAGGACGAGCAGGTCCCCTTC
5 TCCAAGGAGGAATGTGCCTTTCGGTTCACAGCTGGAGACGCCAGAGACCCTGCTG
GGGAGCACCGAAGAGAAGCCCCCTGCCCCCTTGGAGTGCCTGATGCTGGGATGAAG
CCCAGTTAACCAGGCCGGTGTGGGCTGTGTCTGTAGCCAAGGTGGGCTGAGCCCT
GGCAGGATGACCCTGCGAAGGGGGCCCTGGTCTTCCAGGCCCCCACTACTAGGA
CTCTGAGGCTCTTCTGAGGCAAGTTCCTCTAGTGCCCTCCACAGCCGCAGCCTCC
10 CTCTGACCTGCAGGCCAAGAGCAGAGGCAGCGAGTTGGGGAAAGCCTCTGCTGC
CATGGTGTGTCCCTCTCGGAAGGCTGGCTGGGCATGGACGTTCTGGGGCATGCTGG
GGCAAGTCCCTGACTCTCTGTGACCTGCCCCGCCAGCTGCACCTGCCAGCCTGG
CTTCTGGAGCCCCTTGGGTTTTTTGTTTTGTTTTGTTTTGTTTTGTTTTGTTTTCTCCCC
TGGGCTCTGCCCAGCTCTGGCTTCCAGAAAACCCAGCATCCTTTTCTGCAGAGG
15 GGCTTTCTGGAGAGGAGGGATGCTGCCTGAGTCACCCATGAAGACAGGACAGTG
CTTCAGCCTGAGGCTGAGACTGCGGGATGGTCCTGGGGCTCTGTGTAGGGAGGA
GGTGGCAGCCCTGTAGGGAACGGGGTCTTCAAGTTAGCTCAGGAGGCTTGGAA
AGCATCACCTCAGGCCAGGTGCAGTGGCTCACGCCTATGATCCCAGCACTTTGGG
AGGCTGAGGCGGGTGGATCACCTGAGGTTAGGAGTTCGAGACCAGCCTGGCCAA
20 CATGGTAAAACCCCATCTCTACTAAAAATACAGAAATTAGCCGGGCGTGGTGGC
GGGCACCTATAGTCCCAGCTACTCAGAAGCCTGAGGCTGGGAAATCGTTTGAAC
CCGGGAAGCGGAGGTTGCAGGGAGCCGAGATCACGCCACTGCACTCCAGCCTGG
GCGACAGAGCGAGAGTCTGTCTCAAAAGAAAAAAAAAAAAAGCACCGCCTCCAA
ATGCTAACTTGTCTTTTGTACCATGGTGTGAAAGTCAGATGCCCAGAGGGGCCCA
25 GGCAGGCCACCATATTCAGTGCTGTGGCCTGGGCAAGATAACGCACTTCTAACTA
GAAATCTGCCAATTTTTTAAAAAAGTAAGTACCACTCAGGCCAACAAGCCAACG
ACAAAGCCAAACTCTGCCAGCCACATCCAACCCCCACCTGCCATTTGCACCCTC
CGCCTTCACTCCGGTGTGCCTGCAGCCCCGCGCCTCCTTCCCTTGCTGTCTAGGCC
ACACCATCTCCTTTCAGGGAATTTTCAGGAACTAGAGATGACTGAGTCCTCGTAGC
30 CATCTCTCTACTCCTACCTCAGCCTAGACCCTCCTCCTCCCCAGAGGGGTGGGTT
CCTCTTCCCCACTCCCCACCTTCAATTCTGGGCCCCAAACGGGCTGCCCTGCCAC
TTTGGTACATGGCCAGTGTGATCCCAAGTGCCAGTCTTGTGTCTGCGTCTGTGTG
CGTGTCTGTTGGTGTGTGTAGCCAAGGTCGGTAAGTTGAATGGCCTGCCTTGAAGC
CACTGAAGCTGGGATTCTCCCCATTAGAGTCAGCCTTCCCCCTCCAGGGCCAG
35 GGCCCTGCAGAGGGGAAACCAAGTGTAGCCTTGCCCGGATTCTGGGAGGAAGCAG
GTTGAGGGGCTCCTGGAAAGGCTCAGTCTCAGGAGCATGGGGATAAAGGAGAAG
GCATGAAATTGTCTAGCAGAGCAGGGGCAGGGTGATAAATTGTTGATAAATTCC
ACTGGACTTGAGCTTGGCAGCTGAACTATTGGAGGGTGGGAGAGCCCAGCCATT
ACCATGGAGACAAGAAGGGTTTTCCACCCTGGAATCAAGATGTCAGACTGGCTG
40 GCTGCAGTGACGTGCACCTGTACTCAGGAGGCTGAGGGGAGGATCACTGGAGCC
CAGGAGTTTGAGGCTGCAGCGAGCTATGATCGCGCCACTACACTCCAGCCTGAG
CAACAGAGTGAGACCCTGTCTCTTAAAGAAAAAAAAAAGTCAGACTGCTGGGACT
GGCCAGGTTTCTGCCCACATTGGACCCACATGAGGACATGATGGAGCGCACCTG
CCCCCTGGTGGACAGTCCTGGGAGAACCTCAGGCTTCCTTGGCATCACAGGGCAG
45 AGCCGGGAAGCGATGAATTTGGAGACTCTGTGGGGCCTTGGTTCCCTTGTGTGTG
TGTGTTGATCCCAAGACAATGAAAGTTTGCAGTGTATGCTGGACGGCATTCTGC
TTATCAATAAACCTGTTTGTTTTAAAAAAA

SEQ ID NO: 23

>gi|182627|gb|M34539.1|HUMFKBP Human FK506-binding protein (FKBP) mRNA,
complete cds

GAATTCGGGCGCCGCCAGGTCGCTGTTGGTCCACGCCGCCCGTCGCGCCGCCCG
5 CCCGCTCAGCGTCCGCCGCCGCCATGGGAGTGCAGGTGGAAACCATCTCCCCAG
GAGACGGGCGCACCTTCCCCAAGCGCGGCCAGACCTGCGTGGTGCCTACACCG
GGATGCTTGAAGATGGAAAGAAATTTGATTCCCTCCCGGGACAGAAACAAGCCCT
TTAAGTTTATGCTAGGCAAGCAGGAGGTGATCCGAGGCTGGGAAGAAGGGGTTG
10 CCCAGATGAGTGTGGGTCAGAGAGCCAACTGACTATATCTCCAGATTATGCCTA
TGGTGCCACTGGGCACCCAGGCATCATCCACCACATGCCACTCTCGTCTTCGAT
GTGGAGCTTCTAAACTGGAATGACAGGAATGGCCTCCTCCCTTAGCTCCCTGTT
CTTGGATCTGCCATGGAGGGATCTGGTGCCTCCAGACATGTGCACATGAGTCCAT
ATGGAGCTTTTCCTGATGTTCCACTCCACTTTGTATAGACATCTGCCCTGACTGAA
TGTGTTCTGTCACTCAGCTTTGCTTCCGACACCTCTGTTTCCTCTTCCCCTTTCTCC
15 TCGTATGTGTGTTTACCTAAACTATATGCCATAAACCTCAAGTTATTCATTTTATT
TTGTTTTCATTTTGGGGTGAAGATTCAGTTTCAGTCTTTTGGATATAGGTTTCCAA
TTAAGTACATGGTCAAGTATTAACAGCACAAAGTGGTAGGTTAACATTAGAATAG
GAATTGGTGTGGGGGGGGGGTGTGCAAGAATATTTTATTTTAATTTTTTGGATG
AAATTTTTATCTATTATATATTAACATTCTTGCTGCTGCGCTGCAAAGCCATAGC
20 AGATTTGAGGCGCTGTTGAGGACTGAATTACTCTCCAAGTTGAGAGATGTCTTTG
GGTTAAATTAAAAGCCCTACCTAAACTGAGGTGGGGATGGGGAGAGCCTTTGC
CTCCACCATTCCCACCCACCTCCCTTAAACCCTCTGCCTTTGAAAGTAGATCAT
GTTCACTGCAATGCTGGACACTACAGGTATCTGTCCCTGGGCCAGCAGGGACCTC
TGAAGCCTTCTTTGTGGCCTTTTTTTTTTTTTCATCCTGTGGTTTTTCTAATGGACTT
25 TCAGGAATTTTGAATCTCATAACTTTCCAAGCTCCACCCTTCTAAATCTTAAG
AACTTTAATTGACAGTTTCAATTGAAGGTGCTGTTTGTAGACTTAACACCCAGTG
AAAGCCCAGCCATCATGACAAATCCTTGAATGTTCTCTTAAGAAAATGATGCTGG
TCATCGCAGCTTCAGCATCTCCTGTTTTTTGATGCTTGGCTCCCTCTGCTGATCTC
AGTTTCCTGGCTTTTCTCCTCAGCCCCCTTCTACCCCTTTGCTGTCCTGTGTAGT
30 GATTTGGTGAGAAATCGTTGCTGCACCCTTCCCCCAGCACCATTATGAGTCTCA
AGTTTTATTATTGCAATAAAAGTGCTTTATGCCCGAATTC

SEQ ID NO: 24

>gi|1418929|emb|Z74616.1|HSPPA2ICO H.sapiens mRNA for prepro-alpha2(I) collagen

AGCACACGGCAGCAGGAGGTTTCGNGCTAAGTTGGAGGTACTGGNCCACGACT
35 GCATGCCCCGCGCCCGCCAGGTGATACCTCCGCGGTGACCCAGGGGCTCTGCGA
CACAAGGAGTCTGCATGTCTAAGTGCTAGACATGCTCAGCTTTGTGGATACGCGG
ACTTTGTTGCTGCTTGCAGTAACCTTATGCCTAGCAACATGCCAATCTTTACAAG
AGGAAACTGTAAGAAAGGGCCAGCCGGAGATAGAGGACCACGTGGAGAAAGG
40 GGTCCACCAGGCCCCCAGGCAGAGATGGTGAAGATGGTCCCACAGGCCCTCCT
GGTCCACCTGGTCCTCCTGGCCCCCCTGGTCTCGGTGGGAACCTTTGCTGCTCAGT
ATGATGGAAAAGGAGTTGGACTTGGCCCTGGACCAATGGGCTTAATGGGACCTA
GAGGCCACCTGGTGCAGCTGGAGCCCCAGGCCCTCAAGGTTTCCAAGGACCTG
CTGGTGAGCCTGGTGAACCTGGTCAAACCTGGTCCTGCAGGTGCTCGTGGTCCAGC
45 TGGCCCTCCTGGCAAGGCTGGTGAAGATGGTCACCCTGGAAAACCCGGACGACC
TGGTGAGAGAGGAGTTGTTGGACCACAGGGTGCTCGTGGTTTCCCTGGAACCTCCT
GGACTTCCTGGCTTCAAAGGCATTAGGGGACACAATGGTCTGGATGGATTGAAG
GGACAGCCCGGTGCTCCTGGTGTGAAGGGTGAACCTGGTGGCCCTGGTGAAAAT
GGAACCTCAGGTCAAACAGGAGCCCGTGGGCTTCTGGTGAGAGAGGACGTGTT

GGTGCCCCTGGCCCAGCTGGTGCCCGTGGCAGTGATGGAAGTGTGGGTCCCCTG
GGTCCTGCTGGTCCCATTGGGTCTGCTGGCCCTCCAGGCTTCCCAGGTGCCCTG
GCCCCAAGGGTGAAATTGGAGCTGTTGGTAACGCTGGTCCTGCTGGTCCCGCCGG
TCCCCGTGGTGAAGTGGGTCTTCCAGGCCTCTCCGGCCCCGTTGGACCTCCTGGT
5 AATCCTGGAGCAAACGGCCTTACTGGTGCCAAGGGTGCTGCTGGCCTTCCCAGGCG
TTGCTGGGGCTCCCGGCCTCCCTGGACCCCGCGGTATTCCTGGCCCTGTTGGTGCT
GCCGGTGCTACTGGTGCCAGAGGACTTGTGGTGAGCCTGGTCCAGCTGGCTCCA
AAGGAGAGAGCGGTAACAAGGGTGAGCCCGGCTCTGCTGGGCCCCAAGGTCCTC
10 CTGGTCCCAGTGGTGAAGAAGGAAAGAGAGGCCCTAATGGGGAAGCTGGATCTG
CCGGCCCTCCAGGACCTCCTGGGCTGAGAGGTAGTCCTGGTTCTCGTGGTCTTCC
TGGAGCTGATGGCAGAGCTGGCGTCATGGGCCCTCCTGGTAGTCGTGGTGCAAGT
GGCCCTGCTGGAGTCCGAGGACCTAATGGAGATGCTGGTCGCCCTGGGGAGCCT
GGTCTCATGGGACCCAGAGGTCTTCCCTGGTTCCCCTGGAAATATCGGCCCCGCTG
15 GAAAAGAAGGTCCTGTCGGCCTCCCTGGCATCGACGGCAGGCCTGGCCCAATTG
GCCCAGCTGGAGCAAGAGGAGAGCCTGGCAACATTGGATTCCCTGGACCCAAAG
GCCCCACTGGTGATCCTGGCAAAAACGGTGATAAAGGTCATGCTGGTCTTGCTGG
TGCTCGGGGTGCTCCAGGTCCTGATGGAAACAATGGTGCTCAGGGACCTCCTGGA
CCACAGGGTGTTCAAGGTGGAAAAGGTGAACAGGGTCCCGCTGGTCTCCAGGC
20 TTCCAGGGTCTGCCTGGCCCTCAGGTCCCGCTGGTGAAGTTGGCAAACCAGGAG
AAAGGGGTCTCCATGGTGAGTTTGGTCTCCCTGGTCCTGCTGGTCCAAGAGGGGA
ACGCGGTCCCCCAGGTGAGAGTGGTGCTGCCGGTCCTACTGGTCCTATTGGAAGC
CGAGGTCTTCTGGACCCCCAGGGCCTGATGGAAACAAGGGTGAACCTGGTGTG
GTTGGTGCTGTGGGCACTGCTGGTCCATCTGGTCCTAGTGGACTCCCAGGAGAGA
GGGGTGCTGCTGGCATACTGGAGGCAAGGGAGAAAAGGGTGAACCTGGTCTCA
25 GAGGTGAAATTGGTAACCCTGGCAGAGATGGTGCTCGTGGTGCTCATGGTGCTGT
AGGTGCCCTGGTCTGCTGGAGCCACAGGTGACCGGGGCGAAGCTGGGGCTGC
TGGTCCTGCTGGTCTGCTGGTCTCCTCGGGGAAGCCCTGGTGAACGTGGCGAGGTC
GGTCTGCTGGCCCCAACGGATTTGCTGGTCCGGCTGGTGCTGCTGGTCAACCGG
GTGCTAAAGGAGAAAGAGGAGCCAAAGGGCCTAAGGGTGAACCGGTGTTGTT
30 GGTCCCACAGGCCCCGTTGGAGCTGCTGGCCCAGCTGGTCCAAATGGTCCCCCGG
GTCCTGCTGGAAGTCGTGGTGATGGAGGCCCCCCTGGTATGACTGGTTTCCCTGG
TGCTGCTGGACGGAAGTGGTCCCCCAGGACCCTCTGGTATTTCTGGCCCTCCTGGT
CCCCCTGGTCTGCTGGGAAAGAAGGGCTTCGTGGTCTCGTGGTGACCAAGGTC
CAGTTGGCCGAAGTGGAGAAGTAGGTGCAGTTGGTCCCCCTGGCTTCGCTGGTGA
35 GAAGGGTCCCTCTGGAGAGGCTGGTACTGCTGGACCTCCTGGCACTCCAGGTCTC
CAGGGTCTTCTTGGTGCTCCTGGTATTCTGGGTCTCCCTGGCTCGAGAGGTGAAC
GTGGTCTACCTGGTGTTGCTGGTGCTGTGGGTGAACCTGGTCCTCTTGGCATTGCC
GGCCCTCCTGGGGCCCCGTGGTCCTCCTGGTGCTGTGGGTAGTCCTGGAGTCAACG
GTGCTCCTGGTGAAGCTGGTCTGATGGCAACCCTGGGAACGATGGTCCCCCAG
40 GTCGCGATGGTCAACCCGGACACAAGGGAGAGCGCGGTTACCCTGGCAATATTG
GTCCCGTTGGTGCTGCAGGTGCACCTGGTCTCATGGCCCCGTGGGTCTGCTGG
CAAACATGGAAACCGTGGTGAACTGGTCCTTCTGGTCCTGTTGGTCTGCTGGT
GCTGTTGGCCCAAGAGGTCTAGTGGCCCAACAAGGCATTCTGGGCGATAAGGGA
GAGCCCGGTGAAAAGGGGCCAGAGGTCTTCCCTGGCTTAAAGGGACACAATGGA
45 TTGCAAGGTCTGCCTGGTATCGCTGGTCACCATGGTGATCAAGGTGCTCCTGGCT
CCGTGGGTCTGCTGGTCTAGGGGCCCTGCTGGTCTTCTGGCCCTGCTGGAAA
AGATGGTCGCACTGGACATCCTGGTACGGTTGGACCTGCTGGCATTCTGAGGCCCT
CAGGGTCACCAAGGCCCTGCTGGCCCCCTGGTCCCCCTGGCCCTCCTGGACCTC
CAGGTGTAAGCGGTGGTGGTTATGACTTTGGTTACGATGGAGACTTCTACAGGGC

TGACCAGCCTCGCTCAGCACCTTCTCTCAGACCCAAGGACTATGAAGTTGATGCT
 ACTCTGAAGTCTCTCAACAACCAGATTGAGACCCTTCTTACTCCTGAAGGCTCTA
 GAAAGAACCCAGCTCGCACATGCCGTGACTTGAGACTCAGCCACCCAGAGTGGA
 GCAGTGGTTACTACTGGATTGACCCTAACCAAGGATGCACTATGGATGCTATCAA
 5 AGTATACTGTGATTTCTCTACTGGCGAAACCTGTATCCGGGGCCCAACCTGAAAAC
 ATCCCAGCCAAGAAGTGGTATAGGAGCTCCAAGGACAAGAAACACGTCTGGCTA
 GGAGAACTATCAATGCTGGCAGCCAGTTTGAATATAATGTAGAAGGAGTGACT
 TCCAAGGAAATGGCTACCCAACCTTGCCTTCATGCGCCTGCTGGCCAACTATGCCT
 CTCAGAACATCACCTACCACTGCAAGAACAGCATTGCATACATGGATGAGGAGA
 10 CTGGCAACCTGAAAAAGGCTGTCTATTCTACAGGGCTCTAATGATGTTGAACTTGT
 TGCTGAGGGCAACAGCAGGTTCACTTACACTGTTCTTGTAGATGGCTGCTCTAAA
 AAGACAAATGAATGGGGAAAGACAATCATTGAATACAAAACAAATAAGCCATC
 ACGCCTGCCCTTCCTTGATATTGCACCTTTGGACATCGGTGGTGCTGACCATGAA
 TTCTTTGTGGACATTGGCCCAGTCTGTTTCAAATAAATGAACTCAATCTAAATTA
 15 AAAAAAGAAAGAAATTTGAAAAAACTTTCTCTTTGCCATTTCTTCTTCTTTTTT
 AACTGAAAGCTGAATCCTTCCATTTCTTCTGCACATCTACTTGCTTAAATTGTGGG
 CAAAAGAGAAAAAGAAGGATTGATCAGAGCATTGTGCAATACAGTTTCATTAAC
 TCCTTCCCCCGCTCCCCCAAAAATTTGAATTTTTTTTTTCAACACTCTTACACCTGTT
 ATGGAAAATGTCAACCTTTGTAAAGAAAACCAAAATAAAAATTGAAAAATAAAAA
 20 CCATAAACATTTGCACCACTTGTGGCTTTTGAATATCTTCCACAGAGGGAAGTTT
 AAAACCCAAACTTCCAAAGGTTTAACTACCTCAAAACACTTTCCCATGAGTGTG
 ATCCACATTGTTAGGTGCTGACCTAGACAGAGATGAACTGAGGTCCCTTGTTTGT
 TTTGTTCATAATACAAAGGTGCTAATTAATAGTATTTTCAGATACTTGAAGAATGT
 TGATGGTGCTAGAAGAATTTGAGAAGAAATACTCCTGTATTGAGTTGTATCGTGT
 25 GGTGTATTTTTTAAAAAATTTGATTTAGCATTATATTTCCATCTTATTCCCAATT
 AAAAGTATGCAGATTATTTGCCCAAAGTTGTCTCTTCTTCAGATTTCAGCATTTGT
 TCTTTGCCAGTCTCATTTTCATCTTCTTCCATGGTTCCACAGAAGCTTTGTTTCTTG
 GGCAAGCAGAAAAATTAATTGTACCTATTTTGTATATGTGAGATGTTTAAATAA
 ATTGTGAAAAAAATGAAATAAAGCATGTTTGGTTTTCCAAAAGAACATAT

30

SEQ ID NO: 25

>gi|181179|gb|M11233.1|HUMCTHD Human cathepsin D mRNA, complete cds

GGCTATAAGCGCACGGCCTCGGCGACCCTCTCCGACCCGGCCGCCGCCGATGC
 AGCCCTCCAGCCTTCTGCCGCTCGCCCTCTGCCTGCTGGCTGCACCCGCCTCCGCG
 35 CTCGTACAGGATCCCGCTGCACAAGTTACGTCCATCCGCCGGACCATGTCGGAGG
 TTGGGGGCTCTGTGGAGGACCTGATTGCCAAAGGCCCCCGTCTCAAAGTACTCCCA
 GGCGGTGCCAGCCGTGACCGAGGGGCCATTCCCGAGGGTGCTCAAGAACTACAT
 GGACGCCCAGTACTACGGGGAGATTGGCATCGGGACGCCCCCCCCAGTGCTTCAC
 AGTCGTCTTCGACACGGGCTCCTCCAACCTGTGGGTCCCCTCCATCCACTGCAAA
 40 CTGCTGGACATCGCTTGCTGGATCCACCACAAGTACAACAGCGACAAGTCCAGC
 ACCTACGTGAAGAATGGTACCTCGTTTGACATCCACTATGGCTCGGGCAGCCTCT
 CCGGGTACCTGAGCCAGGACACTGTGTCTGGTGCCCTGCCAGTCAGCGTCGTACGC
 CTCTGCCCTGGGCGGTGTCAAAGTGGAGAGGCAGGTCTTTGGGGAGGGCCACCAA
 GCAGCCAGGCATCACCTTCATCGCAGCCAAGTTCGATGGCATCCTGGGCATGGCC
 45 TACCCCCGCATCTCCGTCAACAACGTGCTGCCCGTCTTCGACAACCTGATGCAGC
 AGAAGCTGGTGGACCAGAACATCTTCTCCTTCTACCTGAGCAGGGACCCAGATGC
 GCAGCCTGGGGGTGAGCTGATGCTGGGTGGCACAGACTCCAAGTATTACAAGGG
 TTCTCTGTCCTACCTGAATGTCACCCGCAAGGCCTACTGGCAGGTCCACCTGGAC
 CAGGTGGAGGTGGCCAGCGGGCTGACCCTGTGCAAGGAGGGCTGTGAGGCCATT

GTGGACACAGGCACTTCCCTCATGGTGGGCCCCGGTGGATGAGGTGCGCGAGCTG
 CAGAAGGCCATCGGGGCCGTGCCGCTGATTCAGGGCGAGTACATGATCCCCTGT
 GAGAAGGTGTCCACCCTGCCCGCGATCACACTGAAGCTGGGAGGCAAAGGCTAC
 AAGCTGTCCCCAGAGGACTACACGCTCAAGGTGTCGCAGGCCGGGAAGACCCTC
 5 TGCCTGAGCGGCTTCATGGGCATGGACATCCCGCCACCCAGCGGGCCACTCTGGA
 TCCTGGGCGACGTCTTCATCGGGCCGCTACTACACTGTGTTTGACCGTGACAACAA
 CAGGGTGGGCTTCGCCGAGGCTGCCCCGCCTCTAGTTCCCAAGGCGTCCGCGCGCC
 AGCACAGAAACAGAGGAGAGTCCCAGAGCAGGAGGCCCTGGCCCAGCGGCC
 CTCCCACACACACCCACACACTCGCCCGCCCACTGTCTGGGCGCCCTGGAAGCC
 10 GGCGGCCCAAGCCCGACTTGCTGTTTTGTTCTGTGGTTTTTCCCCTCCCTGGGTTC
 GAAATGCTGCCTGCCTGTCTGTCTCTCCATCTGTTTGGTGGGGGTAGAGCTGATC
 CAGAGCACAGATCTGTTTCGTGCATTGGAAGACCCACCCAAGCTTGGCAGCCG
 AGCTCGTGTATCCTGGGGCTCCCTTCATCTCCAGGGAGTCCCCTCCCCGGCCCTA
 CCAGCGCCCGCTGGGCTGAGCCCCTACCCACACCAGGCCGTCTCCCGGGCCCT
 15 CCCTTGAAACCTGCCCTGCCTGAGGGCCCCCTCTGCCCAGCTTGGGCCCAGCTGG
 GCTCTGCCACCCTACCTGTTCAGTGTCCCGGGCCCGTTGAGGATGAGGCCGCTAG
 AGGCCTGAGGATGAGCTGGAAGGAGTGAGAGGGGACAAAACCCACCTTGTTGGA
 GCCTGCAGGGTGGTGTCTGGGACTGAGCCAGTCCCAGGGGCATGTATTGGCCTGG
 AGGTGGGGTTGGGATTGGGGGCTGGTGCCAGCCTTCCTCTGCAGCTGACCTCTGT
 20 TGTCTCCCCCTTGGGCGGCTGAGAGCCCCAGCTGACATGGAATACAGTTGTTGG
 CCTCCGGCCTCCCCTC

SEQ ID NO: 26

>gi|2167381|gb|AA453712.1|AA453712 aa20f04.r1 Soares_NhHMPu_S1 Homo sapiens
 25 cDNA clone IMAGE:813823 5'
 GCCATTATCTACTCCAAGATCAAGCATTTGCGTTGTGGATGGCAATCGCATCTC
 AGAAACCAGTCTTCCACCGGATATGTATGAATGTCTACGTGTTGCTAACGAAGTC
 ACTCTTAATTAATATCTGTATCCTGGAACAATATTTTATGGTTATGTTTTTCTGTG
 TGTCAGTTTTTCATAGTATCCATATTTTATTACTGTTTATTACTTCCATGAATTTTAA
 30 AATCTGAGGGAAATGTTTTGTAAACATTTATTTTTTTTAAAGAAAAGATGAAAGG
 CAGGCCTATTTTCATCACAAGAACACACACATATACACGAATAGACATCAAATC
 AATGCTTTATTTGTAAATTTAGTGTTTTTTTATTTCTACTGTCAAATGATGTGCAA
 AACCTTTTACTGGTTGCATGGAAATCAGCCAAGTTTTTATAATCCTTAAATCTTAAT
 GTTCCTCAAAGCTTGGATTAAATACATATGGATGTTACTCTCTTGCACCAAATTAT
 35 CTTGATACATTCAAATTTGTCTGGTTAAAAAATAGGTGGTAGATATTGAGGCCAA
 GA

SEQ ID NO: 27

>gi|339730|gb|M75165.1|HUMTM1E H.sapiens epithelial tropomyosin (TM1) mRNA,
 40 complete cds
 CGCCTGCCACCGGTGCACCCAGTCCGCTCACCCAGCCCAGTCCGTCCGGTCCTCA
 CCGCCTGCCGGCCGGCCACCCCCACCGCAGCCATGGACGCCATCAAGAAGAA
 GATGCAGATGCTGAAGCTGGACAAGGAGAACGCCATCGACCGCGCCGAGCAGGC
 CGAAGCCGACAAGAAGCAAGCTGAGGACCGCTGCAAGCAGCTGGAGGAGGAGC
 45 AGCAGGCCCTCCAGAAGAAGCTGAAGGGGACAGAGGATGAGGTGGAAAAGTAT
 TCTGAATCCGTGAAGGAGGCCAGGAGAACTGGAGCAGGCCGAGAAGAAGGC
 CACTGATGCTGAGGCAGATGTGGCCTCCCTGAACCGCCGATTTCAGCTGGTTGAG
 GAGGAGCTGGACCGGGCCAGGAGCGCCTGGCTACAGCCCTGCAGAAGCTGGAG
 GAGGCCGAGAAGGCGGCTGATGAGAGCGAGAGAGGAATGAAGGTCATCGAAAA

CCGGGCCATGAAGGATGAGGAGAAGATGGAAGTGCAGGAGATGCAGCTGAAGG
AGGCCAAGCACATCGCTGAGGATTCAGACCGCAAATATGAAGAGGTGGCCAGGA
AGCTGGTGATCCTGGAAGGAGAGCTGGAGCGCTCGGAGGAGAGGGCTGAGGTG
GCCGAGAGCCGAGCCAGACAGCTGGAGGAGGAACTTCGAACCATGGACCAGGC
5 CCTCAAGTCCCTGATGGCCTCAGAGGAGGAGTATTCCACCAAAGAAGATAAATA
TGAAGAGGAGATCAAACCTGTTGGAGGAGAAGCTGAAGGAGGCTGAGACCCGAG
CAGAGTTTGCCGAGAGGTCTGTGGCAAAGTTGGAGAAAACCATCGATGACCTAG
AAGAGACCTTGGCCAGTGCCAAGGAGGAGAACGTCGAGATTCACCAGACCTTGG
ACCAGACCCTGCTGGAACCTCAACAACCTGTGAGGGCCAGCCCCACCCCCAGCCA
10 GGCTATGGTTGCCACCCCAACCCAATAAACTGATGTTACTAGCC

SEQ ID NO: 28

>gi|189731|gb|J03278.1|HUMPDGFRA Human platelet-derived growth factor (PDGF)
receptor mRNA, complete cds

15 GGCCCCTCAGCCCTGCTGCCCAGCACGAGCCTGTGCTCGCCCTGCCCAACGCAGA
CAGCCAGACCCAGGGCGGCCCTCTGGCGGCTCTGCTCCTCCCGAAGGATGCTTG
GGGAGTGAGGCGAAGCTGGGCGCTCCTCTCCCCTACAGCAGCCCCCTTCCTCCAT
CCCTCTGTTCTCCTGAGCCTTCAGGAGCCTGCACCAGTCCTGCCTGTCCTTCTACT
CAGCTGTTACCCACTCTGGGACCAGCAGTCTTTCTGATAACTGGGAGAGGGCAGT
20 AAGGAGGACTTCCTGGAGGGGGTGACTGTCCAGAGCCTGGAAGTGTGCCACAC
CAGAAGCCATCAGCAGCAAGGACACCATGCGGCTTCCGGGTGCGATGCCAGCTC
TGGCCCTCAAAGGCGAGCTGCTGTTGCTGTCTCTCCTGTTACTTCTGGAACACA
GATCTCTCAGGGCCTGGTCGTCACACCCCCGGGGCCAGAGCTTGTCTCAATGTC
TCCAGCACCTTCGTTCTGACCTGCTCGGGTTCAGCTCCGGTGGTGTGGGAACGGA
25 TGTCCCAGGAGCCCCCACAGGAAATGGCCAAGGCCCAGGATGGCACCTTCTCCA
GCGTGCTCACACTGACCAACCTCACTGGGCTAGACACGGGAGAATACTTTTGCAC
CCACAATGACTCCCGTGGACTGGAGACCGATGAGCGGAAACGGCTCTACATCTTT
GTGCCAGATCCCACCGTGGGCTTCCTCCCTAATGATGCCGAGGAACTATTCATCT
TTCTCACGGAAATAACTGAGATCACCATTCCATGCCGAGTAACAGACCCACAGCT
30 GGTGGTGACACTGCACGAGAAGAAAGGGGACGTTGCACTGCCTGTCCCCTATGA
TCACCAACGTGGCTTTTCTGGTATCTTTGAGGACAGAAGCTACATCTGCAAAACC
ACCATTGGGGACAGGGAGGTGGATTCTGATGCCTACTATGTCTACAGACTCCAGG
TGTCATCCATCAACGTCTCTGTGAACGCAGTGCAGACTGTGGTCCGCCAGGGTGA
GAACATCACCTCATGTGCATTGTGATCGGGAATGAGGTGGTCAACTTCGAGTGG
35 ACATACCCCCGCAAAGAAAGTGGGCGGCTGGTGGAGCCGGTGACTGACTTCCTC
TTGGATATGCCTTACCACATCCGCTCCATCCTGCACATCCCCAGTGCCGAGTTAG
AAGACTCGGGGACCTACACCTGCAATGTGACGGAGAGTGTGAATGACCATCAGG
ATGAAAAGGCCATCAACATCACCGTGGTTGAGAGCGGCTACGTGCGGCTCCTGG
GAGAGGTGGGCACACTACAATTTGCTGAGCTGCATCGGAGCCGGACACTGCAGG
40 TAGTGTTTCGAGGCCTACCCACCGCCCACTGTCCTGTGGTTCAAAGACAACCGCAC
CCTGGGCGACTCCAGCGCTGGCGAAATCGCCCTGTCCACGCGCAACGTGTGCGGA
GACCCGGTATGTGTGTCAGAGCTGACACTGGTTTCGCGTGAAGGTGGCAGAGGCTGG
CCACTACACCATGCGGGCCTTCCATGAGGATGCTGAGGTCCAGCTCTCCTTCCAG
CTACAGATCAATGTCCCTGTCCGAGTGTGAGGCTAAGTGAGAGCCACCCTGACA
45 GTGGGGAACAGACAGTCCGCTGTGCTGGCCGGGGCATGCCCCAGCCGAACATCA
TCTGGTCTGCCTGCAGAGACCTCAAAAGGTGTCCACGTGAGCTGCCGCCCACGCT
GCTGGGGAACAGTTCCGAAGAGGAGAGCCAGCTGGAGACTAACGTGACGTACTG
GGAGGAGGAGCAGGAGTTTGAGGTGGTGTGAGCACACTGCGTCTGCAGCACGTGGA
TCGGCCACTGTCGGTTCGCTGCACGCTGCGCAACGCTGTGGGCCAGGACACGCA

GGAGGTCATCGTGGTGCCACACTCCTTGCCCTTTAAGGTGGTGGTGATCTCAGCC
ATCCTGGCCCTGGTGGTGCTCACCATCATCTCCCTTATCATCCTCATCATGCTTTG
GCAGAAGAAGCCACGTTACGAGATCCGATGGAAGGTGATTGAGTCTGTGAGCTC
TGACGGCCATGAGTACATCTACGTGGACCCCATGCAGCTGCCCTATGACTCCACG
5 TGGGAGCTGCCGCGGGACCAGCTTGTGCTGGGACGCACCCTCGGCTCTGGGGCCT
TTGGGCAGGTGGTGGAGGCCACGGCTCATGGCCTGAGCCATTCTCAGGCCACGA
TGAAAGTGGCCGTCAAGATGCTTAAATCCACAGCCCGCAGCAGTGAGAAGCAAG
CCCTTATGTCGGAGCTGAAGATCATGAGTCACCTTGGGCCCCACCTGAACGTGGT
CAACCTGTTGGGGGCTGCACCAAAGGAGGACCCATCTATATCATCACTGAGTAC
10 TGCCGCTACGGAGACCTGGTGGACTACCTGCACCGCAACAAACACACCTTCCTGC
AGCACCACTCCGACAAGCGCCGCCCCGCCCAGCGCGGAGCTCTACAGCAATGCTC
TGCCCGTTGGGCTCCCCCTGCCAGCCATGTGTCCTTGACCGGGGAGAGCGACGG
TGGCTACATGGACATGAGCAAGGACGAGTCGGTGGACTATGTGCCCATGCTGGA
CATGAAAGGAGACGTCAAATATGCAGACATCGAGTCCTCCAACCTACATGGCCCC
15 TTACGATAACTACGTTCCCTCTGCCCTGAGAGGACCTGCCGAGCAACTTTGATC
AACGAGTCTCCAGTGCTAAGCTACATGGACCTCGTGGGCTTCAGCTACCAGGTGG
CCAATGGCATGGAGTTTCTGGCCTCCAAGAACTGCGTCCACAGAGACCTGGCGG
CTAGGAACGTGCTCATCTGTGAAGGCAAGCTGGTCAAGATCTGTGACTTTGGCCT
GGCTCGAGACATCATGCGGGACTCGAATTACATCTCAAAGGCAGCACCTTTTTG
20 CCTTTAAAGTGGATGGCTCCGGAGAGCATCTTCAACAGCCTCTACACCACCCTGA
GCGACGTGTGGTCCCTTCGGGATCCTGCTCTGGGAGATCTTCACCTTGGGTGGCAC
CCCTTACCCAGAGCTGCCCATGAACGAGCAGTTCTACAATGCCATCAAACGGGGT
TACCGCATGGCCCAGCCTGCCCATGCCTCCGACGAGATCTATGAGATCATGCAGA
AGTGCTGGGAAGAGAAGTTTGAGATTCGGCCCCCTTCTCCCAGCTGGTGCTGCT
25 TCTCGAGAGACTGTTGGGCGAAGGTTACAAAAAGAAGTACCAGCAGGTGGATGA
GGAGTTTCTGAGGAGTGACCACCCAGCCATCCTTCGGTCCCAGGCCCGCTTGCCT
GGGTTCCATGGCCTCCGATCTCCCCTGGACACCAGCTCCGTCCTCTATACTGCCGT
GCAGCCCAATGAGGGTGACAACGACTATATCATCCCCCTGCCTGACCCCAAACCC
GAGGTTGCTGACGAGGGGCCCACTGGAGGGTTCCCCCAGCCTAGCCAGCTCCACC
30 CTGAATGAAGTCAACACCTCCTCAACCATCTCCTGTGACAGCCCCCTGGAGCCCC
AGGACGAACCAGAGCCAGAGCCCCAGCTTGAGCTCCAGGTGGAGCCGGAGCCAG
AGCTGGAACAGTTGCCGGATTTCGGGGTGCCCTGCGCCTCGGGCGGAAGCAGAGG
ATAGCTTCCTGTAGGGGGCTGGCCCCTACCCTGCCCTGCCTGAAGCTCCCCCCT
GCCAGCACCCAGCATCTCCTGGCCTGGCCTGACCGGGCTTCCTGTCAGCCAGGCT
35 GCCCTTATCAGCTGTCCCCTTCTGGAAGCTTTCTGCTCCTGACGTGTTGTGCCCCA
AACCTTGGGGCTGGCTTAGGAGGCAAGAAAACCTGCAGGGGGCCGTGACCAGCCCT
CTGCCTCCAGGGAGGCCAACTGACTCTGAGCCAGGGTTCCCCCAGGGAACCTCAG
TTTTCCCATATGTAAGATGGGAAAGTTAGGCTTGATGACCCAGAATCTAGGATTC
TCTCCCTGGCTGACAGGTGGGGAGACCGAATCCCTCCCTGGGAAGATTCTTGAG
40 TTAAGTGGTAAATTAACCTTTTTTCTGTTTACGCCAGCTACCCCTCAAGGAATC
ATAGCTCTCCTCGCACTTTTTATCCACCCAGGAGCTAGGGAAGAGACCCTAGC
CTCCCTGGCTGCTGGCTGAGCTAGGGCCTAGCCTTGAGCAGTGTTGCCTCATCCA
GAAGAAAGCCAGTCTCCTCCCTATGATGCCAGTCCCTGCGTTCCTGGCCCGAGC
TGGTCTGGGGCCATTAGGCAGCCTAATTAATGCTGGAGGCTGAGCCAAGTACAG
45 GACACCCCCAGCCTGCAGCCCTTGCCAGGGCACTTGAGGCACACGCAGCCATA
GCAAGTGCCTGTGTCCCTGTCCTTCAGGCCCATCAGTCCTGGGGCTTTTTCTTTAT
CACCTCAGTCTTAATCCATCCACCAGAGTCTAGAAGGCCAGACGGGCCCCGCAT
CTGTGATGAGAATGTAAATGTGCCAGTGTGGAGTGGCCACGTGTGTGTGCCAGTA
TATGGCCCTGGCTCTGCATTGGACCTGCTATGAGGCTTTGGAGGAATCCCTCACC

CTCTCTGGGCCTCAGTTTCCCCTTCAAAAAATGAATAAGTCGGACTTATTAACCTCT
GAGTGCCTTGCCAGCACTAACATTCTAGAGTATTCCAGGTGGTTGCACATTTGTC
CAGATGAAGCAAGGCCATATACCCTAAACTTCCATCCTGGGGGTCAGCTGGGCTC
CTGGGAGATTCCAGATCACACATCACACTCTGGGGACTCAGGAACCATGCCCTT
5 CCCCAGGCCCCCAGCAAGTCTCAAGAACACAGCTGCACAGGCCTTGACTTAGAG
TGACAGCCGGTGTCTTGAAAGCCCCAAGCAGCTGCCCCAGGGACATGGGAAGA
CCACGGGACCTCTTTCACTACCCACGATGACCTCCGGGGGTATCCTGGGCAAAAG
GGACAAAGAGGGGCAAATGAGATCACCTCCTGCAGCCCACCACTCCAGCACCTGT
GCCGAGGTCTGCGTCGAAGACAGAATGGACAGTGAGGACAGTTATGTCTTGTA
10 AAGACAAGAAGCTTCAGATGGTACCCCAAGAAGGATGTGAGAGGTGGCCGCTTG
GAGTTTGCCCCTCACCCACCAGCTGCCCCATCCCTGAGGCAGCGCTCCATGGGGG
TATGGTTTTGTCACTGCCCAGACCTAGCAGTGACATCTCATTGTCCCCAGCCCAG
TGGGCATTGGAGGTGCCAGGGGAGTCAGGGTTGTAGCCAAGACGCCCCCGCACG
GGGAGGGTTGGGAAGGGGGTGCAGGAAGCTCAACCCCTCTGGGCACCAACCCTG
15 CATTGCAGGTTGGCACCTTACTTCCCTGGGATCCCCAGAGTTGGTCCAAGGAGGG
AGAGTGGGTTCTCAATACGGTACCAAAGATATAATCACCTAGGTTTACAAATATT
TTTAGGACTCACGTTAACTCACATTTATACAGCAGAAATGCTATTTTGTATGCTGT
TAAGTTTTTCTATCTGTGTACTTTTTTTTAAGGGAAAGATTTT

SEQ ID NO: 29

>2210910T6

ACAAGAGATGGGGAAGGAAAAGGACCAGACTGTACTGTGGCCATGTACACAAA
GGCATGCACCACATCCCAGCTCTGCTGCCCTGGGCTGTCCCACAGGCAGCTCTCT
AGAAGTTGAGAGCCTCAAAGGGGGCCTCATGAAGCCCAGATCTTCCCTGGTCAA
25 GCTGATGGCATTTCGTATAACTGAAAGTTGGGGAAGACCACCAGGTCAGTGGAGT
GGAGAGGTTTTGTATATGGTCTTCTTTGAAGAACTTACTTCTTGCAAGCCCTGG
CATCTTCCAATTGGCTGTCTAGTAGTGGACGTGGCATCAGCCTACCAGCAATGG
NGGTCTACTCACCCCTTCACTGNGTTTTGTCCCTGAAGTCAGAAGCCCTGGCACAG
CCAAGTTCACAGGCCAAATCACACTTCAGGCCACACTGCTTCACGCAATGACAC
30 ACGTACAGACGGATATACAGAAACACTTCTCNAGGAGTGCATGAGCATGGTTCA
TTTCATATTTTCNTTCNATCCAGTCTTTAAAANGCAGCACCTTGGTGAAAGCAGTG
GAG

SEQ ID NO: 30

>gi|1888315|gb|U09278.1|HSU09278 Human fibroblast activation protein mRNA, complete
cds

AAGAACGCCCCCAAATCTGTTTCTAATTTTACAGAAATCTTTTGAAACTTGGCA
CGGTATTCAAAGTCCGTGGAAAGAAAAAACCTTGTCTGGCTTCAGCTTCCAA
CTACAAAGACAGACTTGGTCCTTTTCAACGGTTTTTCACAGATCCAGTGACCCACG
40 CTCTGAAGACAGAATTAGCTAACTTTCAAAAACATCTGGAAAAATGAAGACTTG
GGTAAAAATCGTATTTGGAGTTGCCACCTCTGCTGTGCTTGCCTTATTGGTGATGT
GCATTGTCTTACGCCCTTCAAGAGTTCATAACTCTGAAGAAAAATACAATGAGAGC
ACTCACACTGAAGGATATTTTAAATGGAACATTTTCTTATAAAAACATTTTTC
ACTGGATTTTCAAGACAAGAATATCTTCATCAATCTGCAGATAACAATATAGTACT
45 TTATAATATTGAAACAGGACAATCATATACCATTTTGAGTAATAGAACCATGAAA
AGTGTGAATGCTTCAAATTACGGCTTATCACCTGATCGGCAATTTGTATATCTAG
AAAGTGATTATTCAAAGCTTTGGAGATACTCTTACACAGCAACATATTACATCTA
TGACCTTAGCAATGGAGAATTTGTAAGAGGAAATGAGCTTCTCGTCCAATTTCAG
TATTTATGCTGGTCGCCTGTTGGGAGTAAATTAGCATATGTCTATCAAAACAATA

TCTATTTGAAACAAAGACCAGGAGATCCACCTTTTCAAATAACATTTAATGGAAG
 AGAAAATAAAATATTTAATGGAATCCCAGACTGGGTTTATGAAGAGGAAATGCT
 TCCTACAAAATATGCTCTCTGGTGGTCTCCTAATGGAAAATTTTGGCATATGCG
 GAATTTAATGATAAGGATATAACCAGTTATTGCCTATTCCTATTATGGCGATGAAC
 5 AATATCCTAGAACAAATAAATATTCCATACCCAAAGGCTGGAGCTAAGAATCCCG
 TTGTTTCGGATATTTATTATCGATAACCACTTACCCTGCGTATGTAGGTCCCCAGGAA
 GTGCCTGTTCCAGCAATGATAGCCTCAAGTGATTATTATTTTCAGTTGGCTCACGT
 GGGTTACTGATGAACGAGTATGTTTGCAGTGGCTAAAAAGAGTCCAGAATGTTTC
 GGTCTGTCTATATGTGACTTCAGGGAAGACTGGCAGACATGGGATTGTCCAAAG
 10 ACCCAGGAGCATATAGAAGAAAGCAGAACTGGATGGGCTGGTGGATTCTTTGTT
 TCAAGACCAGTTTTTCAGCTATGATGCCATTTTCGTAATAAAAATATTTAGTGACA
 AGGATGGCTACAAACATATTCATATATCAAAGACACTGTGGAAAATGCTATTCA
 AATTACAAGTGGCAAGTGGGAGGCCATAAATATATTCAGAGTAACACAGGATTC
 ACTGTTTTATTCTAGCAATGAATTTGAAGAATACCCTGGAAGAAGAAACATCTAC
 15 AGAATTAGCATTGGAAGCTATCCTCCAAGCAAGAAGTGTGTTACTTGCCATCTAA
 GGAAAGAAAGGTGCCAATATTACACAGCAAGTTTCAGCGACTACGCCAAGTACT
 ATGCACTTGTCTGCTACGGCCCAGGCATCCCCATTTCCACCCTTCATGATGGACG
 CACTGATCAAGAAATTAATAATCCTGGAAGAAAACAAGGAATTGGAAAATGCTTT
 GAAAAATATCCAGCTGCCTAAAGAGGAAATTAAGAACTTGAAGTAGATGAAAT
 20 TACTTTATGGTACAAGATGATTCTTCTCCTCAATTTGACAGATCAAAGAAGTAT
 CCCTTGCTAATTCAAGTGTATGGTGGTCCCTGCAGTCAGAGTGTAAGGTCTGTAT
 TTGCTGTTAATTGGATATCTTATCTTGCAAGTAAGGAAGGGATGGTCATTGCCTT
 GGTGGATGGTCGAGGAACAGCTTTCCAAGGTGACAACTCCTCTATGCAGTGTAT
 CGAAAGCTGGGTGTTTATGAAGTTGAAGACCAGATTACAGCTGTCAGAAAATTC
 25 ATAGAAATGGGTTTCATTGATGAAAAAAGAATAGCCATATGGGGCTGGTCCTAT
 GGAGGATACGTTTCATCACTGGCCCTTGCACTCTGGAAGTGGTCTTTCAAATGTG
 GTATAGCAGTGGCTCCAGTCTCCAGCTGGGAATATTACGCGTCTGTCTACACAGA
 GAGATTCATGGGTCTCCCAACAAAGGATGATAATCTTGAGCACTATAAGAATTCA
 ACTGTGATGGCAAGAGCAGAATATTTAGAAATGTAGACTATCTTCTCATCCACG
 30 GAACAGCAGATGATAATGTGCACTTTCAAACCTCAGCACAGATTGCTAAAGCTCT
 GGTAAATGCACAAGTGGATTTCAGGCAATGTGGTACTCTGACCAGAACCACGG
 CTTATCCGGCCTGTCCACGAACCACTTATACACCCACATGACCCACTTCCTAAAG
 CAGTGTTTCTCTTTGTCAGACTAAAAACGATGCAGATGCAAGCCTGTATCAGAAT
 CTGAAAACCTTATATAAACCCCTCAGACAGTTTGCTTATTTTATTTTTATGTTGT
 35 AAAATGCTAGTATAAACAAACAAATTAATGTTGTTCTAAAGGCTGTAAAAAAA
 AGATGAGGACTCAGAAGTTCAAGCTAAATATTGTTTACATTTTCTGGTACTCTGT
 GAAAGAAGAGAAAAGGGAGTCATGCATTTTGCTTTGGACACAGTGTTTATCACC
 TGTTTATTTGAAGAAAAATAATAAAGTCAGAAGTTCAAAAAAAAAAAAAAAAAA
 AAAAAAGCGGCCGCTCG

40

SEQ ID NO: 31

>gi|1874639|gb|AA243828.1|AA243828 zr67a10.r1 Soares_NhHMPu_S1 Homo sapiens
 cDNA clone IMAGE:668442 5' similar to TR:G433338 G433338 PROTEIN-TYROSINE
 KINASE PRECURSOR ;

45

AATTTTGTTCACCGAGATCTGGCCACACGAACTGTTTAGTGGGTAAGAACTACA
 CAATCAAGATAGCTGACTTTGGAATGAGCAGGAACCTGTACAGTGGTGACTATT
 ACCGGATCCAGGGCCGGGCAGTGCTCCCTATCCGCTGGATGTCTTGGGAGAGTAT
 CTTGCTGGGCAAGTTCACTACAGCAAGTGATGTGTGGGCCTTTGGGGTACTTTG
 TGGGAGACTTTCACCTTTTGTCAAGAACAGCCCTATTCCCAGCTGTCAGATGAAC

5

10

15

25

30

40

45

27

GCTGCTTCTGGCCCAATGCAGAGGTGGACAGGTTCTTCCTGGCAGTGCATGGCCG
CTACTTCAGGAGCTGCCCCATCTCAGGCAGGGCCGTGCGGGACCCGCCCGGCAG
CATCCTCTACCCCTTCATCGTGGTCCCCATCACGGTGACCCTGCTGGTGACGGCA
CTGGTGGTCTGGCAGAGCAAGCGCACTGAGGGCATTGTGTAGGCGGGGCCAGG
5 CTGCCCCGCGGGTGCACCCAGGCTGCAGGGTGAGGCCAGGCAGGCCTGGGTAGGG
GCAGCTTCTGGAGCCTTGGGACAGAGCAGGCCACAATGCCCCCTTCTTCCAGC
CAAGAAGAGCTCACAGGAGTCCAGAGTAGCCGAGGCTCTGGTATTAACCTGGAA
GCCCCCTGGCTGGAGGCCACCGCCACCCTAGGAAGGGGGCAGGGACGTGACCT
TGACTTACCTCTGGAAAGGGTCCCAGCCTAGACTGCTTACCCCATAGCCACATTT
10 GTGGATGAGTGGTTTGTGATTAAGGGATGTTCTTG

SEQ ID NO: 36

>gi|1627385|gb|AA085318.1|AA085318 zn12f12.r1 Stratagene hNT neuron (#937233)

Homo sapiens cDNA clone IMAGE:547247 5'

15 ACATTCTGCAATGGCAGCATTCCCACCAACAAAATCCATGTGACCATTCTGCCTC
TCCTCAGGAGAAAGTACCCTCTTTTACCAACTTCCTCTGCCATGTTTTTCCCCTGC
TCCCCTGAGACCACCCCAACACAAAACATTTCATGTAAGTCTCCAGCCATTGTA
ATTTGAAGATGTGGATCCCTTTAGAACGGTTGCCCCAGTAGAGTTAGCTGATAAG
GGAACCTTTATTTAAATGNATGTCTTAAAT

20

SEQ ID NO: 37

>gi|2156363|gb|AA443688.1|AA443688 zw86d05.s1 Soares_total_fetus_Nb2HF8_9w Homo
sapiens cDNA clone IMAGE:783849 3'

25 TTTTCAAAGTTACAATAGTTTAATAATTTAAATAGGACCAACTTCAGGAACATAC
ATACTCATACATAAAATTAACAATTTAATTTTGAACAGTGTATTGAAATACATC
AAATTCTTAAAAATCCCCCAAATGGACTCAAGATCATGGATATGAAAAGGTAAT
TTTGAAGTACTAAAGACTAGAGTAAAACAGACAAAGTCATTACTTTGCATTTACT
AATAAGACAACAGCCTGTGGATACATTAGACCTTTATAAGAACACTTCTAGGAA
ATGTTAGAACACGAGTCATTAAAAAGGAATATAAATGAGTTCATAAAGATAAA
30 TGTATAGCTGACAATTTCTTTGGTCCTCGAAGTCACACTTGTTTTTACTTTAAAT
GCCAAACATGAGTTGAGTGCT

SEQ ID NO: 38

>29 BLOOD 441249.1 AF086432 g3483777 Human full length insert cDNA clone

35 ZD79H11.0

GGCAGGAGAATTTGAAAGGGTGCCCCAAAGGACAATCTCTAAAGGGGTAAGGG
AGATACCTACCTTGTCTGGTAGGGGAGATGTTTCGTTTTTCATGCTTTACCAGAAA
ATCCACTTCCCTGCCGACCTTAGTTTCAAAGCTTATTCTTAATTAGAGACAAGAA
ACCTGTTTCAACTTGAAGACACCGTATGAGGTGAATGGACAGCCAGCCACCACA
40 ATGAAAGAAATCAAACCAGGAATAACCTATGCTGAACCCACGCCTCAATCGTCC
CCAAGTGTTTCCTGACACGCATCTTTGCTTACAGTGCATCACAACCTGAAGAATGG
GGTTCAACTTGACGCTTGCAAAATTACCAAATAACGAGCTGCACGGCCAAGAGA
GTCACAATTCAGGCAACAGGAGCGACGGGCCAGGAAAGAACACCACCCTTCACA
ATGAATTTGACACAATTGTCTTGCCAGTGCTTTATCTCATTATATTTGTGGCAAGC
45 ATCTTGCTGAATGGTTTAGCAGTGTGGATCTTCTTCCACATTAGGAATAAAACCA
GCTTCATATTCTATCTCAAAAACATAGTGGTTGCAGACCTCATAATGACGCTGAC
ATTTCCATTTCTGAATAGTCCATGATGCAGGATTTGGACCTTGGTACTTCAAGTTTA
TTCTCTGCAGATACACTTCAGTTTTGTTTTATGCAAACATGTATACTTCCATCGTG
TTCCTTGGGCTGATAAGCATTGATCGCTATCTGAAGGTGGTCAAGCCATTTGGGG

ACTCTCGGATGTACAGCATAACCTTCACGAAGGTTTTATCTGTTTGTGTTTGGGTG
ATCATGGCTGTTTTGTCTTTGCCAAACATCATCCTGACAAATGGTCAGCCAACAG
AGGACAATATCCATGACTGCTCAAACTTAAAAGTCCTTTGGGGGTCAAATGGC
ATACGGCAGTCACCTATGTGAACAGCTGCTTGTGTTGTGGCCGTGCTGGTGATTCT
5 GATCGGATGTTACATAGCCATATCCAGGTACATCCACAAATCCAGCAGGCAATTC
ATAAGTCAGTCAAGCCGAAAGCGAAAACATAACCAGAGCATCAGGGTTGTTGTG
GCTGTGTTTTTTACCTGCTTTCTACCATATCACTTGTGCAGAATTCCTTTTACTTTT
AGTCACTTAGACAGGCTTTTAGATGAATCTGCACAAAAAATCCTATATTACTGCA
AAGAAATTACACTTTTCTTGTCTGCGTGTAATGTTTGCCTGGATCCAATAATTTAC
10 TTTTTCATGTGTAGGTCATTTTCAAGAAGGCTGTTCAAAAAATCAAATATCAGAA
CCAGGAGTGAAAGCATCAGATCACTGCAAAGTGTGAGAAGATCGGAAGTTCGCA
TATATTATGATTACACTGATGTGTAGGCCTTTTATTGTTTGTGGAATCGATATGT
ACAAAGTGTAAAAAAATGTTTCTTTCATTAAAAAATAAAAAAAAAAAAAAAG

15 SEQ ID NO: 39

>2601724H1

CTCGCAGGTCTCAACATATGCACTAGTGGAAGTGCCACCTCATGTGAAGAATGTC
TGCTAATCCACCCAAAATGTGCCTGGTGCTCCAAAGAGGACTTCGGAAGCCAC
GGTCCATCACCTCTCGGTGTGATCTGAGGGCAAACCTTGTCAAAAATGGCTGTGG
20 AGGTGAGATAGAGAGCCCAGCCAGCAGCTTCCATGTCCTGAGGAGCCTGCCCT
CAGCAGCAAGGGTTCGGGCTCTGCAGGCTGGGACGTCATTCAGATGACACCACA
GGAGATTGCCGTGA

SEQ ID NO: 40

25 >3248833H1

GGCGAGCGGACTCGACTCGGCACCGCTGTGCACCATGGCCCGGGCCCTGTGCCG
CCTCCCGCGGCGGGCCCTCTGGCTGCTCCTGGCCCATCACCTCTTCATGACCACTG
CCTGCCAGGAGGCTAACTACGGTGCCCTCCTCCGGGAGCTCTGCCTCACCCAGTT
CCAGGTAGACATGGAGGCGCTCGGGGAGACGCTGTGGTGTGACTGGGGCAGGAC
30 CATCAGGAGCTACAGGGAGCTGGCCGACTGCACCTGGCACATGGCGGAGAAGCT
GGGCTGCTTCTGGCCCAATGCAGAGGTGGACAGGTTCTTCCTGGCA

SEQ ID NO: 41

>gi|2253586|gb|U37791.1|HSU37791 Homo sapiens clone rasi-1 matrix metalloproteinase

35 RASI-1 mRNA, complete cds

CCTAGCACTGCTCCCCCAAGGCTCCCAGAAATCTCAGGTCAGAGGCACGGACAG
CCTCTGGAGCTCTCGTCTGGTGGGACCATGAACTGCCAGCAGCTGTGGCTGGGCT
TCCTACTCCCCATGACAGTCTCAGGCGGGTCTGGGGCTTGCAGAGGTGGCGCC
CGTGGACTACCTGTCACAATATGGGTACCTACAGAAGCCTCTAGAAGGATCTAAT
40 AACTTCAAGCCAGAAGATATCACCGAGGCTCTGAGAGCTTTTCAGGAAGCATCT
GAACTTCCAGTCTCAGGTCAGCTGGATGATGCCACAAGGGCCCGCATGAGGCAG
CCTCGTTGTGGCCTAGAGGATCCCTTCAACCAGAAGACCCTTAAATACCTGTTGC
TGGGCCGCTGGAGAAAGAAGCACCTGACTTTCGCGCATCTTGAACCTGCCCTCCAC
CCTTCCACCCACACAGCCCGGGCAGCCCTGCGTCAAGCCTTCCAGGACTGGAGC
45 AATGTGGCTCCCTTGACCTTCCAAGAGGTGCAGGCTGGTGC GGCTGACATCCGCC
TCTCCTTCCATGGCCGCCAAAGCTCGTACTGTTCCAATACTTTTGATGGGCCTGGG
AGAGTCCTGGCCCATGCCGACATCCCAGAGCTGGGCAGTGTGCACTTCGACGAA
GACGAGTTCTGGACTGAGGGGACCTACCGTGGGGTGAACCTGCGCATCATTGCA
GCCCATGAAGTGGGCCATGCTCTGGGGCTTGGGCACTCCCGATATTCCAGGCC

TCATGGCCCCAGTCTACGAGGGCTACCGGCCCCACTTTAAGCTGCACCCAGATGA
TGTGGCAGGGATCCAGGCTCTCTATGGCAAGAAGAGTCCAGTGATAAGGGATGA
GGAAGAAGAAGAGACAGAGCTGCCCACTGTGCCCCCAGTGCCCACAGAACCCAG
TCCCATGCCAGACCCTTGACAGTAGTGAAGTGGATGCCATGATGCTGGGGCCCCGT
5 GGAAGACCTATGCTTTCAAGGGGGACTATGTGTGGACTGTATCAGATTCAGGA
CCGGGCCCCCTTGTTCCGAGTGTCTGCCCTTTGGGAGGGGGCTCCCCGAAACCTGG
ATGCTGCTGTCTACTCGCCTCGAACACAATGGATTCACTTCTTTAAGGGAGACAA
GGTGTGGCGCTACATTAATTTCAAGATGTCTCCTGGCTTCCCCAAGAAGCTGAAT
AGGGTAGAACCTAACCTGGATGCAGCTCTCTATTGGCCTCTCAACCAAAAGGTGT
10 TCCTCTTTAAGGGCTCCGGGTACTGGCAGTGGGACGAGCTAGCCCGAACTGACTT
CAGCAGCTACCCCAAACCAATCAAGGGTTTGTTTACGGGAGTGCCAAACCAGCC
CTCGGCTGCTATGAGTTGGCAAGATGGCCGAGTCTACTTCTTCAAGGGCAAAGTC
TACTGGCGCCTCAACCAGCAGCTTCGAGTAGAGAAAGGCTATCCCAGAAATATTT
CCCACAACCTGGATGCACTGTCTCGTCCCCGGACTATAGACACTACCCCATCAGGTGG
15 GAATACCACTCCCTCAGGTACGGGCATAACCTTGGATACCACTCTCTCAGCCACA
GAAACCACGTTTGAATACTGACTGCTACCCACAGACACAATCTTGGACATTAAC
CCCTGAGGCTCCACCACCCACCCTTTTCAATTTCCCCCCCCAGAAGCCTAAGGCCTAA
TAGCTGAATGAAATACCTGTCTGCTCAGTAGAACCTTGCAGGTGCTGTAGCAGGC
GCAAGACCGTAGATCTCAGGCCTCTAACACTTCCAACCTCCAGCCACCCTTTCT
20 GTGCATTTTCACTCCTGAGAAGTGTCCCCTAACTCAGATCCCCTAACTTAGATTT
GGCCCCCAACTCCATTTCTGTCTGTCTTAGACAGCCCTTCCAACCTGTGTCTATCTC
TTCTCTGGAGGTCAATGGTGGAGGGAGATGCCTGGGTCCTGTTCTTCTACATAA
AATGCAAGAAAACAGCATGGCCAGTAACTGAGCAAGGGCCTTGGAATCCTTGA
GAATCACATTTATGTGCTTATGATTACGGGCAAGCTAATTAACCTTGTGTAATCT
25 CAGATTCCCCATTTGCAACATTAGGTTAAGACCAGTACTGCAGGATTGTTGCACT
AAATGAAATACTGTATGTGAAGTGCCTGGCACAGTGTCTGGTACATTTGTGTTTA
ATAAAAGCTAACTCCATGTTTATAAGAGAGGACTGAACAGCTCTTCTCTAGCTG
TCTGGCTGTATAACTCTTACAGTAGTCTGTATAATAAGGGCATCTCTATTAGATCT
TTAGGGGACAGAGGATTTGTCAAGATGGTTAGCTCTTTGTTTTGGGGTGCAGAGA
30 AAGAAAAGAGCAGCAACAGCAGAGGCTGGACTCCCTGGTTCAGTATTTAATGCC
ATTTTATTACATGCTCCCATGTTCTCCCTCCCTCCCATTTGTAGCCTTGCTGCCCA
GGGGAGGGATATGTCTTCCTTTATGCATCTGGGAAACCAGGAACAGACCCTGCG
CAGGAGAGTCAGAGGGGGAAGAGTTAGAATGGGTCAGTGGCTGGAACAAAGTT
CTGGTTAAGGAGGAAATTAGTGCCACCCACGGTGAGAAGCAGAGAAGGCACTTG
35 CATCCTATGCAGCCCTGAAGACCAGGCTCCTTTGGGCAAAAGGCAAGACTCTGG
CAGGTGGGTCAATGCTCTCTCCTTGGAGCAAGAAGCCAGCTTTTGGGGAAGGCA
GGTCCTGAGGCAGGCACTGCCCTGTGGTCTTCCCCAGGTTGAGGAGAGAAGTGG
AAGCCCCATGGAAGACAGTGTCTCCAGCTGAGGTAGGAGGCGGAGGTGGGGGTG
GGGGTAGTTTAAGCCTATGGGGCCCAGGGGGAAAGGCCAAACAGAAACCCAACT
40 ACCCCCTAATGAAGGGCCTGGAGGTTGGGGTATCTTGGAGCTCCTCAGAGCCCTT
CTTCCCATCAAAAAGGTATCAAATGCCTTGGAAGCTCCCTGATCCTACAAAACAA
AAAAATGCTTATTTTTTACCACTGTGAGGCAAGCTGAGGTGAACATTTAAAAGGCT
ATTTCAAGACGAGGTGCGGTGGCTATAATCCTAGCACTTTGGGAGGCTGAAGCA
GGAGGATCACTTGAGCCCAGGAGTTCAAGACCAGCTTGGGCAACATAGGGAGAC
45 CCTGTCTCTGCAAAAAAATAAAAAACGAATACATAAAAAATTAAAAA

SEQ ID NO: 42

>gi|1923242|gb|U83410.1|HSU83410 Human CUL-2 (cul-2) mRNA, complete cds

1
GCGAGCTGACAGCCGCCGCCGCCGCCGCTCCGCCACCTTCCTCGCCGGGGCTT
CGTCTTTCACCTCCTTCGGGCTGCCTCCCCCTCCCCTTGTCCTCCCTGCCCTTGCCCTG
CTTCTGCAGAAGATTTCAACACTACACTTGCACAATGTCTTTGAAACCAAGAGTA
GTAGATTTTGATGAAACATGGAACAAACTTTTGACGACAATAAAAGCCGTGGTC
5 ATGTTGGAATACGTCGAAAGAGCAACATGGAATGACCGTTTCTCAGATATCTATG
CTTTATGTGTGGCCTATCCTGAACCCCTTGAGAGAAAGACTTTATACAGAACTAA
GATTTTTTTGGAAAATCATGTTCCGGCATTTCATAAGAGAGTTTTGGAGTCAGAA
GAACAAGTACTTGTTATGTATCATAGGTACTGGGAAGAATACAGCAAGGGTGCA
GACTATATGGACTGCTTATATAGGTATCTCAGCACCCAGTTTATTAATAAAGAATA
10 AATTAACAGAAGCGGACCTTCAGTATGGCTATGGTGGTGTAGATATGAATGAAC
CACTTATGGAAATAGGAGAGCTAGCATTGGATATGTGGAGGAAATTGATGGTTG
AACCACCTTCAGGCCATCCTTATCCGAATGCTGCTCCGAGAAATCAAAAATGATCG
TGGTGGAGAAGACCCAAACCAGAAAGTAATCCATGGGGTTATTAACCTCCTTTGTT
CATGTTGAACAGTATAAGAAAAAATTCCTTAAAGTTTTATCAGGAAATTTTTG
15 AGTCTCCCTTTCTGACTGAAACAGGAGAGTATTACAAACAAGAAGCTTCAAATTT
ATTACAAGAATCAAACCTGCTCACAGTATATGGAAAAGGTTTTAGGTAGATTA
AGATGAAGAAATTCGATGTGCAAAATACCTACATCCAAGTTCATATACTAAGGT
GATTCATGAATGTCAACAACGAATGGTAGCAGACCACTTACAGTTTTTACATGCA
GAATGTCATAATATAATTTCGACAAGAGAAAAAAATGACATGGCAAATATGTAC
20 GTCTTACTCCGTGCTGTGTCCACTGGTTTACCTCATATGATTCAGGAGCTGCAA
ACCACATCCATGATGAGGGCCTTCGAGCAACCAGCAACCTTACTCAGGAAAACA
TGCCAACACTATTTGTGGAGTCAGTTTTGGAAGTGCATGGTAAATTTGTTTACGCT
TATCAACACTGTTTTGAATGGTGATCAGCATTTTATGAGTGCGTTGGATAAGGCC
CTTACGTCAGTTGTAAATTACAGAGAACCTAAGTCTGTTTGCAAAGCACCTGAAC
25 TGCTTGCTAAGTACTGTGACAACCTTACTGAAGAAGTCAGCGAAAGGGATGACAG
AGAATGAAGTGGAAGACAGGCTTACGAGCTTCATCACAGTGTTCAAATACATTG
ATGACAAGGACGTCTTTCAAAGTTCTACGCAAGAATGCTGGCAAAACGTTTAAT
TCATGGGTATCCATGTCTATGGACTCTGAAGAAGCCATGATCAACAAATTAAAG
CAAGCCTGTGGTTATGAGTTTACCAGCAAGCTACATCGGATGTATACAGATATGA
30 GTGTCAGCGCTGATCTCAACAATAAGTTCAACAATTTTATCAAAAACCAAGACAC
AGTAATAGATTTGGGAATTAGTTTTCAAATATATGTTCTACAGGCTGGTGCCTGG
CCTCTTACTCAGGCTCCTTCATCTACGTTTGCAATTCCCCAGGAATTAGAAAAAA
GTGTACAGATGTTTGAATTATTTTATAGCCAACATTTTCAAGTGAAGGAACTTAC
ATGGTTACATTATCTGTGTACAGGTGAAGTTAAAATGAACTATTTGGGCAAACCA
35 TATGTAGCCATGGTTACAACATACCAAATGGCAGTTCTTCTTGCTTTAACAACA
GTGAAACTGTCAGTTATAAAGAGCTTCAGGACAGCACTCAGATGAATGAAAAGG
AACTGACAAAAACAATCAAATCATTACTTGATGTGAAAATGATTAACCATGATTC
AGAAAAGGAAGATATTGATGCAGAATCTTCGTTTTTATTAATATGAACTTTAGC
AGTAAAAGAACAAAATTTAAAATTACTACATCAATGCAGAAAGACACACCACAA
40 GAAATGGAGCAGACTAGAAGTGCAGTTGATGAGGACCGGAAAATGTATCTCCAA
GCTGCTATAGTTTCGTATCATGAAAGCACGAAAAGTGCTTCGGCACAATGCCCTTA
TTCAAGAGGTGATTAGCCAGTCAAGAGCTAGGTTTAAATCCCAGTATCAGCATGAT
TAAGAAGTGTATTGAAGTTCTGATAGACAAACAATACATAGAACGCAGCCAGGC
GTCGGCAGATGAATACAGCTACGTCGCGTGATGTCGCTCTCCTCCAGCGTGGTGT
45 GAGAAGATCATTGCCATCACCATTTGGTGTGTTTCTGTGGGAAAAAGCAGGACTG
TGCCTCCATAATTTGGTCATTTGGCAGCCCCTGTTTTCTGCTGTTTACAACATCAC
CAGTGCCACGTCATGAGCGTCAAAGAAAATGCCTAGAGATATTTCAAGCTCATG
ACATTATGACATTTCTTAAACTTTATTAATAAAGAATGAGTGAAGTATTGCTGAAA
AGTGGAATAATCGGTTGGGTACCATGCTTTTTCTCCCTTCACGTTTGCAGTTGATG

TGTCCTTTTTTTTTTTTTTTAATGTATCTTAAAGGACATAAAATTTAAAAACTTAAA
TATTGTAATATGACAGATAACCTAATAATTGTATCTACATTAATAATGACAAACAT
GATACTGCTGCTTGTCAAATAAAAAAAAAAAAAAAAAAAAAA

5 SEQ ID NO: 43

>gi|1337927|gb|W49672.1|W49672.zc41f07.s1 Soares_senescent_fibroblasts_NbHSF Homo sapiens cDNA clone IMAGE:324901 3'

TTTTTTTTTTTTTATATTTATATTTATATTTATATATATATGTATATATATATATATGTN
ATGTACAAAAGACTTTGAGATATCAGGCACCATTAAACCACATTTCCCCCCTTAT
10 AAATGCAACTGTTCAAGTACACTGGGAACAGTTTAAAGGTACACCTGCAGTACA
NTAGGAGAAGCATGAGTGGATAATCTAAACACAGGATCATAACAGTGATACGCT
GCAACACCTCTGTGAATTCCATTANCCAAGTTCTGTTCATTAAAACATNGGAAAAC
TACTGGCTCCTCAAAATAAAAGGTTTTAGGNAACCAAAAATCCCCTAAGTAGTG
AACTGTTTTCCAAGCAGAGCTCCCTAATGGTTTTCAATTTCTTGGGCCTACAACC
15 AAANGGGGACCCAGTTGGAAGCTGCCGTTTGGGAAACGTGGGCCAGGCATCAG
ATCANCAACACGGGGGGGAATCCNGAGAGGGGCNCATTNTTGAAGAAGGNG

SEQ ID NO: 44

>3486371H1

20 TTTCTCCAGCTTTGCCCCTGTGGGTGATGCTCTAACAGTGACCTGGAATTTTCGTC
CTCTAGACGGGGGACCTGAGCAGTTTGTATTCTACTACCACATAGATCCCTTCCA
ACCCATGAGTGGGCGGTTTAAGGACCGGGTGTCTTGGGATGGGAATCCTGAGCG
GTACGATGCCTCCATCCTTCTCTGGAACTGCAGTTCGACGACAATGGGACATAC
ACCTGCCAGGTGAAGAACCCACCTGATGTT

25

SEQ ID NO: 45

>gi|595923|gb|U16811.1|HSU16811 Human Bak mRNA, complete cds

GAGGATCTACAGGGGACAAGTAAAGGCTACATCCAGATGCCGGGAATGCACTGA
CGCCCATTCCTGGAACTGGGCTCCCACTCAGCCCCTGGGAGCAGCAGCCGCCA
30 GCCCTCGGACCTCCATCTCCACCCTGCTGAGCCACCCGGGTGGGCCAGGATCC
CGGCAGGCTGATCCCGTCTCCACTGAGACCTGAAAAATGGCTTCGGGGCAAGG
CCCAGGTCCTCCCAGGCAGGAGTGCGGAGAGCCTGCCCTGCCCTCTGCTTCTGAG
GAGCAGGTAGCCCAGGACACAGAGGAGGTTTTCCGCAGCTACGTTTTTTACCGCC
ATCAGCAGGAACAGGAGGCTGAAGGGGTGGCTGCCCTGCCGACCCAGAGATGG
35 TCACCTTACCTCTGCAACCTAGCAGCACCATGGGGCAGGTGGGACGGCAGCTCG
CCATCATCGGGGACGACATCAACCGACGCTATGACTCAGAGTTCAGACCATGTT
GCAGCACCTGCAGCCACGGCAGAGAATGCCTATGAGTACTTCACCAAGATTGC
CACCAGCCTGTTTGAGAGTGGCATCAATTGGGGCCGTGTGGTGGCTCTTCTGGGC
TTCGGCTACCGTCTGGCCCTACACGTCTACCAGCATGGCCTGACTGGCTTCCTAG
40 GCCAGGTGACCCGCTTCGTGGTTCGACTTCATGCTGCATCACTGCATTGCCCGGTG
GATTGCACAGAGGGGTGGCTGGGTGGCAGCCCTGAACTTGGGCAATGGTCCCAT
CCTGAACGTGCTGGTGGTTCTGGGTGTGGTTCTGTTGGGCCAGTTTGTGGTACGA
AGATTCTTCAAATCATGACTCCCAAGGGTGCCCTTTGGGTCCCGGTTTCAGACCCC
TGCCTGGACTTAAGCGAAGTCTTTGCCTTCTCTGTTCCCTTGCAGGGTCCCCCTC
45 AAGAGTACAGAAGCTTTAGCAAGTGTGCACTCCAGCTTCGGAGGCCCTGCGTGG
GGGCCAGTCAGGCTGCAGAGGCACCTCAACATTGCATGGTGCTAGTGCCCTCTCT
CTGGGCCCAGGGCTGTGGCCGTCTCCTCCCTCAGCTCTCTGGGACCTCCTTAGCC
CTGTCTGCTAGGCGCTGGGGAGACTGATAACTTGGGGAGGCAAGAGACTGGGAG
CCACTTCTCCCAGAAAGTGTTTAACGGTTTTAGCTTTTTATAATACCCTTGTGAG

AGCCCATTCACCATTCCTACCTGAGGCCAGGACGTCTGGGGTGTGGGGATTGGT
 GGGTCTATGTTCCCCAGGATTACAGCTATTCTGGAAGATCAGCACCTAAGAGATG
 GGACTAGGACCTGAGCCTGGTCTGGCCGTCCCTAAGCATGTGTCCCAGGAGCA
 GGACCTACTAGGAGAGGGGGGGCCAAGGTCCTGCTCAACTCTACCCCTGCTCCCAT
 5 TCCTCCCTCCGGCCATACTGCCTTTGCAGTTGGACTCTCAGGGATTCTGGGCTTGG
 GGTGTGGGGTGGGGTGGAGTCGCAGACCAGAGCTGTCTGAACTCACGTGTCAGA
 AGCCTCCAAGCCTGCCTCCCAAGGTCCTCTCAGTTCTCTCCCTTCTCTCCTTA
 TAGACACTTGCTCCCAACCCATTCACTACAGGTGAAGGCTCTCACCCATCCCTGG
 GGGCCTTGGGTGAGTGGCCTGCTAAGGCTCCTCCTTGCCCAGACTACAGGGCTTA
 10 GGACTTGTTTGTATATCAGGGAAAAGGAGTAGGGAGTTCATCTGGAGGGTTCT
 AAGTGGGAGAAGGACTATCAACACCACTAGGAATCCCAGAGGTGGATCCTCCCT
 CATGGCTCTGGCACAGTGTAATCCAGGGGTGTAGATGGGGGAACTGTGAATACT
 TGAACCTCTGTTCCCCCACCTCCATGCTCCTCACCTGTCTAGGTCTCCTCAGGGTG
 GGGGGTGACAGTGCCCTTCTCTATTGGCACAGCCTAGGGTCTTGGGGGTGAGGGG
 15 GGAGAAGTTCTTGATTACGCCAAATGCAGGGAGGGGAGGCAGATGGAGCCCAT
 GGCCACCCCTATCCTCTGAGTGTTGGAAATAAACTGTGCAATCCCCTCAAAAA
 AAAACGGAGATCC

SEQ ID NO: 46

20 >gi|1940946|gb|AA293050.1|AA293050 zt54d02.r1 Soares ovary tumor NbHOT Homo
 sapiens cDNA clone IMAGE:726147 5'
 GGTGCTGTTTAAAGTCACATCCCTGTAAATTGCAGAATTCAAAAGTGATTATCTC
 TTTGATCTACTTGCCCTCATTTCCCTATCTTCTCCCCACGGTATCCTAACTTTAG
 ACTTCCCACTGTTCTGAAAGGAGACATTGCTCTATGTCTGCCTTCGACCACAGCA
 25 AGCCATCATCCTCCATTGCTCCCGGGGACTCAAGAGGAATCTGTTTCTCTGCTGT
 CAACTTCCCATCTGGCTCAGCATAGGGTCACTTTGCCATTATGCAAATGGAGATA
 AAAGCAATTCTGACTGTCCAGGAGCTAATCTGACCGTTCTATTGTGTGGATGACC
 ACATAAGAAGGCAATTTTAGTGTATTAATCATAGATTATTATAAACTATAAACTT
 AAGGGCAAGGAGTTTATTACAATGTATCTTTATTAAAACAAAAGGGTGTATAGTG
 30 TTCACAACTGTGAAAATAGTGT

SEQ ID NO: 47

>gi|757037|gb|R06417.1|R06417 yf09a05.s1 Soares fetal liver spleen 1NFLS Homo sapiens
 cDNA clone IMAGE:126320 3' similar to gb:M23410 PLAKOGLOBIN (HUMAN);
 35 TTTTCAACGCATCTGTGTTATTTTTATTTTCTTTGCTTTGGTCTATACAAAAAAAC
 CAATAACCAAAAACATAAAGCGATAATAATAAAACACTCTGCTTGGACCTCCCC
 CAGCCCCCACACCATGTGCGGGAAATGGGGGGGTCTGAAACAGGAAGGGGAA
 GAGAAAGCCCCTCACACACACCAGAGGGGTGAGCCAAGAGCACTTNTCGGGGT
 CAGCTAGGGGCAGCTGTGTGGGGTGGGGACAGGGGTTTGAGGGAAGCTNTCCCC
 40 AGAGCTCCCTGGGGNAGTTGAGGGGGTGGGGCAAAGCCAACCTTAAGGCACCTG
 GGGAGAGAGAA

SEQ ID NO: 48

>1321982H1

45 CCGGCCTTGGAACAACTGTGGAACCTGAGGCCGCTTGCCCTCCCGCCCCATGGAG
 CGGCCCCCGGGGCTGCGGCCGGGCGCGGGCGGGCCCTGGGAGATGCGGGAGCG
 GCTGGGCACCGGCGGCTTCGGGAACGTCTGTCTGTACCAGCATCGGGAACCTTGAT
 CTCAAATAGCAATTAAGTCTTGTGCGCTAGAGCTAAGTACCAAAAACAGAGAA
 CGATGGT

SEQ ID NO: 49

>gi|2215504|gb|AA488073.1|AA488073 ab13d08.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:840687 3' similar to gb:J05582 MUCIN 1 PRECURSOR

5 (HUMAN);G TTCAGGATCCCCGCTATCTCAGGGCTCTCTGGGCCAGTCCTCCTGGG
AGCCCCACCACAACACTTCCCAGGCATGAGCTCTCAGGCGCCACATGAGCTTCC
ACACACTGAGAAGTGTCCGAGAAATTGGTGGGGCCTCTGAAGGACGTGTGAGCA
GCCACCTGAACTCCCAGCTCACCAGCCCAAACAGGGTGCAGGGGCTCTGGCCTG
AAGAACCCTGAGTGGAGTGGAAATGGCACTGGCTGGCCACTCAGCTCAGCGGGCGA
10 CGTGCCCCTACAAGTTGGCAGAAAGTGGCTGCCACTGCTGGGTTTGTGTAAGAGAG
GCTGCTGCACCATTACCTGCAGAAACCTTCTCATAGGGGCTACGATCGGTACTGC
TAGGGGGCACATAGCGGCCATGGGTGTGGTAGGTGGGGTACTCGCTCATAGGAT
GGTAAGTATCCCGGGCTGGAAAGATGTCCAGCTGCCCCTAATTCTTTCCGCGGCA
CTTACAGACAGGCAAGGCAATGAGATAGACAATGGCCAGCGCACACAGGACAAA
15 GACCAGCACCAACAGCGCATGGCCCCAGCCTGGACC

SEQ ID NO: 50

>gi|32468|emb|X63368.1|HSHSJ1MR H.sapiens HSJ1 mRNA

20 CCCGCCTGACGACTGACCAGTTGCCATGGCATCCTACTACGAGATCCTAGACGTG
CCGCGAAGTGCGTCCGCTGATGACATCAAGAAGGCGTATCGGCGCAAGGCTCTC
CAGTGGCACCCAGACAAAAACCCAGATAATAAAGAGTTTGCTGAGAAGAAATTT
AAGGAGGTGGCCGAGGCATATGAAGTGCTGTCTGACAAGCACAAGCGGGAGATT
TACGACCGCTATGGCCGGGAAGGGCTGACAGGGACAGGAAGTGGCCCATCTCGG
GCAGAAGCTGGCAGTGGTGGGCCTGGCTTCACCTTCACCTTCCGCGAGCCCCGAGG
25 AGGTCTTCCGGGAATTCTTTGGGAGTGGAGACCCTTTTGCAGAGCTCTTTGATGA
CCTGGGCCCCCTTCTCAGAGCTTCAGAACCGGGGTTCCCGACACTCAGGCCCTTC
TTTACCTTCTCTTCCCTCCTTCCCTGGGCACTCCGATTTCTCCTCCTCATCTTTCTCC
TTCAGTCCTGGGGCTGGTGCTTTTCGCTCTGTTTCTACATCTACCACCTTTGTCCA
AGGACGCCGCATCACACACGCAGAATCATGGAGAACGGGCAGGAGCGGGTGG
30 AAGTGGAGGAGGATGGGCAGCTGAAGTCAGTCACAATCAATGGTGTCCCAGATG
ACCTGGCACGTGGCTTGGAGCTGAGCCGTCGCGAGCAGCAGCCGTCAGTCACTTC
CAGGTCTGGGGGCACTCAGGTCCAGCAGACCCCTGCCTCATGCCCCCTTGACAGC
GACCTCTCTGAGGATGAGGACCTGCAGCTGGCCATGGCCTACAGCCTGTCAGAG
ATGGAGGCAGCTGGGAAGAAACCCGCAGGTGGGCGGGAGGCACAGCACCGGACG
35 GCAGGGGGCGCCCAAGGCCACGACCAAGATCCAGGCTTGGGGGGGACCCAGGA
GGGTGCGAGGGGTGAAGCAACCAAACGCAGTCCATCCCCAGAGGAGAAGGCCTC
TCGCTGCCTCATCCTCTGAACACCGGGCCCAACCTGATCTGATCCAGATCTTGAC
TGGGGGGTCTGACTCACTGTGGGAAGAGAAGAGGGGAGTATCCTGAGTTGTAGG
AACTGCTTTCCAACCTCCAAGCTCCCTCCACAAGTTTCCCTCCCCAGGCCCCCAC
40 ACCCCAGTGTGGACTTGGGATTTGCTGTGCTCAGCCCAGGGCTGATAGGTCCCTG
GTGAAGCCCAGGGTGGGGGGTGTGAGGGCAGTGGAGGGGGCCCGAGGAGCCAGG
TTGCATTTATTGGATGGGGAGCTCCAAGGGGCATTAGTGGTTTGGGCTGGGCTTT
TGTGCCCTGGTACTCTGCCACCTGTGTTGCTGATGGTGTCAAGGAAGGAGGACTT
GGCCTAGGGTTGTCTGAGCCGGAGCCGGCAGCTCCACTGGAGAGCAGTGCAGGC
45 AGAGTGGAGCCTCCTGCTCTCCTGGACCAGCTGCAGACCCCAACCCTGGTTTCT
GTGCCATGTTGCGCTCTGACCGTCTCTGTTGCTTCTCTTCTGGTGTGCTTCTCCTC
CCTCCCATTCTCTCTGCAACTCCTGCGGGCGCATCGCTTGCTTTCCTGCGTCTG
GCTAGGACTCCCTTCTTCCCTTCCCTCCCCGAGAAGGCCTCAATGTGGCGAGGAAG
ATGCTGGGGCCGGTAGGGCTGTGAGATCTTCTGGGGAGGCTAGCCGGGTGGGGC

GGGAGCCTCTCAGCTGTCCAGATTCAGAACTGGAGCCCACTCCTCCTCCCTCTCG
 TTGCCTCAGCCCTGCCCTCACCTCAGACTAGGCAGAGGTGAGGCTGGCTCACCC
 TGAAGAGGTGGGATAGGAGGGGACTGCACCCATACTGCTTCCCTACCACAAATC
 AGGGCTCAGGGAGAGGCCATGCGGCAGCCAGGTCTGCATGCTGAGCCCCATCC
 5 TCCACAGCTTGCCGCTGACGCTCTCTCCTGTACCCCGCCCCCTGCTCTCTCCCCAG
 ATGTGTTCTGAGCTGGATGCCGGGTTCAGAATCGCTGCACAGTTCCAACAGGAC
 AGCGCCTTCCCCCATGCGCTGGGAGGGGACCCTCCATTTCTCCCCCTCACCCATG
 CTGAGTGTAGAGCCGGGGCCTGGGTGGCGGGTGGGGGCGGGGTGGGAGGTGGCA
 GTAGTCTTAGCCTGTGCACTCTCTTCCTTGGGTGTTTGGTGCTGGCTCCTGGGGAC
 10 TACAAATCCCAGAGTGCGGTGTGCCCGGCCTCATTTCTGATAGATCCCGCTTGGG
 GGAGGTGGTGTATGGTTACGGAGCTGTGCATCTTGGGACATGTAGTAGCCAGGT
 CTTGTCACTCGCTGTGAGATGGGGAGATTTTGTCTTTTGATTTATCCCTGTAGGGC
 TGGCAGGGTTGTAGATGAAGGGGGAATGATCTGAGCCTTGGTTCCCTGACACGT
 CTTGCTAGCCCCAGGGTTAGAGTGGGCAGGGCAGAGCCGCGCAGCACCTGGGAG
 15 CGGTACCTTTCCCTTGGGCAGCCTGGGGTCCCAGGAACAAGCCAGGGCGAGTGG
 CATGTCTGCCTGAGCAGGGTGTGGCCCCAGAAAGCTGAGGAGTGTGGGCTGGCA
 GAGAGCTTCGAGGGGCAAGGCCACCCGCGGGGGCGTGTGTGTGGTGGGGCTTGGC
 ATGTGATGGCAGCTCCAGCTCCAGGCATGCCGCTGCTTGTATGGCTTTCTTTGGC
 CTCTGACCCTGCTGCCATTCTTTCCAACATCACAGATGAACTGCCTCTCCTCCTC
 20 CCTGCCTGGGGAGCCCAGTGGCCAGGGAGGGAGTGGTGGAGCCAGTCGCTGTAA
 CACTGAGCCTCAGAGACGAACCAAAACCAGCTGGGCTGAGCTCAGATCCAGGGG
 GAAGAAATGCTGGAAGTCAATAAAACTGAGTTTGAGAAAAAAAAAAAAAAAAA

SEQ ID NO: 51

25 >gi|31112|emb|X00663.1|HSEGF01 Human mRNA fragment for epidermal growth factor
 (EGF) receptor
 ATCCTGCATGGCGCCGTGCGGTTTCAGCAACAACCCTGCCCTGTGCAACGTGGAGA
 GCATCCAGTGGCGGGACATAGTCAGCAGTGACTTTCTCAGCAACATGTCGATGG
 ACTTCCAGAACCACCTGGGCAGCTGCCAAAAGTGTGATCCAAGCTGTCCCAATG
 30 GGAGCTGCTGGGGTGCAGGAGAGGAGAAGTGCAGAAACTGACCAAAATCATCT
 GTGCCAGCAGTGCTCCGGGCGCTGCCGTGGCAAGTCCCCCAGTGACTGCTGCCA
 CAACCAGTGTGCTGCAGGCTGCACAGGCCCGGGAGAGCGACTGCCTGGTCTG
 CCGCAAATTCCGAGACGAAGCCACGTGCAAGGACACCTGCCCCCACTCATGCT
 CTACAACCCACACGTACCAGATGGATGTGAACCCCGAGGGCAAATACAGCTT
 35 TGGTGCCACCTGCGTGAAGAAGTGTCCCGTAATTATGTGGTGACAGATCACGGC
 TCGTGCGTCCGAGCCTGTGGGGCCGACAGCTATGAGATGGAGGAAGACGGCGTC
 CGCAAGTGTAAGAAGTGCGAAGGGCCTTGCCGCAAAGTGTGTAAACGGAATAGGT
 ATTGGTGAATTTAAAGACTCACTCTCCATAAATGCTACGAATATTAAACACTTCA
 AAAACTGCACCTCCATCAGTGGCGATCTCCACATCCTGCCGGTGGCATTTAGGGG
 40 TGACTCCTTCACACATACTCCTCCTCTGGATCCACAGGAACTGGATATTCTGAAA
 ACCGTAAAGGAAATCACAGGGTTTTTGCTGATTCAGGCTTGGCCTGAAAACAGG
 ACGGACCTCCATGCCTTTGAGAACCTAGAAATCATACGCGGCAGGACCAAGCAA
 CATGGTCAGTTTTCTCTTGCAAGTCGTCAGCCTGAACATAACATCCTTGGGATTAC
 GCTCCCTCAAGGAGATAAGTGTGAGATGTGATAATTTAGGAAACAAAAATT
 45 TGTGCTATGCAAATACAATAAACTGGAAAAAACTGTTTGGGACCTCCGGTCAGA
 AAACCAAAATTATAAGCAACAGAGGTGAAAACAGCTGCAAGGCCACAGGCCAG
 GTCTGCCATGCCTTGTGCTCCCCGAGGGCTGCTGGGGCCCGGAGCCAGGGACT
 GCGTCTCTTGCCGGAATGTCAGCCGAGGCAGGGAATGCGTGGACAAGTGCAACC
 TTCTGGAGGGTGAGCCAAGGGAGTTTGTGGAGAACTCTGAGTGCATACAGTGCC

ACCCAGAGTGCCTGCCTCAGGCCATGAACATCACCTGCACAGGACGGGGACCG
 ACAACTGTATCCAGTGTGCCCCTACATTGACGGCCCCCACTGCGTCAAGACCTG
 CCCGGCAGGAGTCATGGGAGAAAACAACACCCTGGTCTGGAAGTACGCAGACGC
 CGGCCATGTGTGCCACCTGTGCCATCCAACTGCACCTACGGATGCACTGGGCCA
 5 GGTCTTGAAGGCTGTCCAACGAATGGGCCTAAGATCCCGTCCATCGCCACTGGGA
 TGGTGGGGGGCCCTCCTCTTGCTGCTGGTGGTGGCCCTGGGGATCGGCCTCTTCAT
 GCGAAGGCGCCACATCGTTCGGAAGCGCACGCTGCGGAGGCTGCTGCAGGAGAG
 GGAGCTTGTGGAGCCTCTTACACCCAGTGGAGAAGCTCCCAACCAAGCTCTCTTG
 AGGATCTTGAAGGAACTGAATTCAAAAAGATCAAAGTGTGGGCTCCGGTGCG
 10 TTCGGCACGGTGTATAAGGGACTCTGGATCCCAGAAGGTGAGAAAGTTAAAATT
 CCCGTCGCTATCAAGGAATTAAGAGAAGCAACATCTCCGAAAGCCAACAAGGAA
 ATCCTCGATGAAGCCTACGTGATGGCCAGCGTGGACAACCCCCACGTGTGCCGCC
 TGCTGGGCATCTGCCTCACCTCCACCGTGCAACTCATCACGCAGCTCATGCCCTT
 CGGCTGCCTCCTGGACTATGTCCGGGAACACAAAGACAATATTGGCTCCCAGTAC
 15 CTGCTCAACTGGTGTGTGCAGATCGCAAAGGGCATGAACTACTTGGAGGACCGT
 CGCTTGGTGCACCGCGACCTGGCAGCCAGGAACGTACTGGTGAAAACACCGCAG
 CATGTCAAGATCACAGATTTTGGGCTGGCCAACTGCTGGGTGCGGAAGAGAAA
 GAATACCATGCAGAAGGAGGCAAAGTGCCTATCAAGTGGATGGCATTGGAATCA
 ATTTTACACAGAATCTATACCCACCAGAGTGATGTCTGGAGCTACGGGGTGACCG
 20 TTTGGGAGTTGATGACCTTTGGATCCAAGCCATATGACGGAATCCCTGCCAGCGA
 GATCTCCTCCATCCTGGAGAAAGGAGAACGCCTCCCTCAGCCACCCATATGTACC
 ATCGAT

SEQ ID NO: 52

25 >gi|1162923|gb|L41147.1|HUM5HSR Homo sapiens 5-HT6 serotonin receptor mRNA,
 complete cds
 CCCGAGAGCGCCCATTCACCCCCCTCACCCACCTCCCCGCGTTCCCACTTCCCCG
 CACTCTGACCCGGCCGGACGCCCCCTCCCCTATCTTGCCGCCCCGCCCCCTCCAGGG
 GGCTCTGCTCCCACCCCAGGGAGCCCATCCGACCTCTGCTTGACTTCCCGCCGCT
 30 TCCTTCAGGGGCGCTCGGCTCATCGGGTGCCCCCTCCCCAACTTCCAACCCGTTTG
 CTCCAGGAGTTCTTGCCCCATCCCCGAGGGCGCCCCAAATAGCCACACTGTGTCTT
 CCTGTAGTCGCCGCCCCCTGACCTAGCGCGACCCAGCGCCCCCGCCCATGTCCCC
 CCACTCACCTCCCCCGGGGGGCGTGGTGAAGTCGCGGTCTGTTCTCACGGACGGTC
 CCCGTCCAGCCTGCGCTTCGCCGGGGCCCTCATCTGCTTCCCGCCACCCTATCAC
 35 TCCCTTGCCGTCCACCCTCGGTCTCATGGTCCCAGAGCCGGGCCCCAACCGCCAA
 TAGCACCCCGGCCTGGGGGGCAGGGCCGCGCTCGGCCCCGGGGGGCAGCGGCTG
 GGTGGCGGCCGCGCTGTGCGTGGTCATCGCGCTGACGGCGGCGGCCAACTCGCT
 GCTGATCGCGCTCATCTGCACTCAGCCCGCGCTGCGCAACACGTCCAATTCTTC
 CTGGTGTCGCTCTTCACGTCTGACCTGATGGTGGGGCTGGTGGTGAAGCGCCGG
 40 CCATGCTGAACGCGCTGTACGGGCGCTGGGTGCTGGCGCGCGGCCTCTGCCTGCT
 CTGGACCGCCTTCGACGTGATGTGCTGCAGCGCCTCCATCCTCAACCTCTGCCTC
 ATCAGCCTGGACCGCTACCTGCTCATCCTCTCGCCGCTGCGCTACAAGCTGCGCA
 TGACGCCCCCTGCGTGCCCTGGCCCTAGTCCTGGGCGCCTGGAGCCTCGCCGCTCT
 CGCCTCCTTCTGCCCCCTGCTGCTGGGCTGGCACGAGCTGGGCCACGCACGGCCA
 45 CCCGTCCCTGGCCAGTGCCGCCTGCTGGCCAGCCTGCCTTTTGTCTTGTGGCGTC
 GGGCCTCACCTTCTTCTGCCCCCTCGGGTGCCATATGCTTCACCTACTGCAGGATCC
 TGCTAGCTGCCCCGAAGCAGGCCGTGCAGGTGGCCTCCCTCACCACCGGCATGGC
 CAGTCAGGCCTCGGAGACGCTGCAGGTGCCAGGACCCACGCCCAGGGGTGGA
 GTCTGCTGACAGCAGGCGTCTAGCCACGAAGCACAGCAGGAAGGCCCTGAAGGC

CAGCCTGACGCTGGGCATCCTGCTGGGCATGTTCTTTGTGACCTGGTTGCCCTTCT
 TTGTGGCCAACATAGTCCAGGCCGTGTGCGACTGCATCTCCCCAGGCCTCTTCGA
 TGTCTCACATGGCTGGGTTACTGTAACAGCACCATGAACCCCATCATCTACCCA
 CTCTTCATGCGGGACTTCAAGCGGGCGCTGGGCAGGTTCTTGCCATGTCCACGCT
 5 GTCCCCGGGAGCGCCAGGCCAGCCTGGCCTCGCCATCACTGCGCACCTCTCACAG
 CGGCCCCCGGCCCGGCCTTAGCCTACAGCAGGTGCTGCCGCTGCCCCTGCCGCCG
 GACTCAGATTCGGA CT CAGACGCAGGCTCAGGCGGCTCCTCGGGCCTGCGGGCTC
 ACGGCCCAGCTGCTGCTTCTTGCGGAGGCCACCCAGGACCCCCCGCTGCCACCA
 GGGCCGCTGCCGCCGTCAATTTCTTCAACATCGACCCCGCGGAGCCCGAGCTGCG
 10 GCCGCATCCACTTGGCATCCCCACGAACTGACCCGGGCTTGGGGCTGGCCAATGG
 GGAGCTGGATTGAGCAGAACCCAGACCCTGAGTCCTTGGGCCAGCTCTTGGCTA
 AGACCAGGAGGCTGCAAGTCTCCTAGAAGCCCTCTGAGCTCCAGAGGGGTGCGC
 AGAGCTGACCCCTGCTGCCATCTCCAGGCCCTTACCTGCAGGGATCATAGCTG
 ACTCAGA

SEQ ID NO: 53

>gi|181970|gb|M32977.1|HUMEGFAA Human heparin-binding vascular endothelial growth factor (VEGF) mRNA, complete cds

CAGTGTGCTGGCGGCCCGGCGCGAGCCGGCCCCGGCCCCGGTCGGGCCTCCGAAA
 20 CCATGAACTTTCTGCTGTCTTGGGTGCATTGGAGCCTCGCCTTGCTGCTCTACCTC
 CACCATGCCAAGTGGTCCCAGGCTGCACCCATGGCAGAAGGAGGAGGGCAGAAT
 CATCACGAAGTGGTGAAGTTCATGGATGTCTATCAGCGCAGCTACTGCCATCCAA
 TCGAGACCCTGGTGGACATCTTCCAGGAGTACCCTGATGAGATCGAGTACATCTT
 CAAGCCATCCTGTGTGCCCTGATGCGATGCGGGGGCTGCTGCAATGACGAGGG
 25 CCTGGAGTGTGTGCCCACTGAGGAGTCCAACATCACCATGCAGATTATGCGGATC
 AAACCTCACCAAGGCCAGCACATAGGAGAGATGAGCTTCCTACAGCACAACAAA
 TGTGAATGCAGACCAAAGAAAGATAGAGCAAGACAAGAAAATCCCTGTGGGCCT
 TGCTCAGAGCGGAGAAAGCATTGTGTTGTACAAGATCCGCAGACGTGTAAATGTT
 CCTGCAAAAACACAGACTCGCGTTGCAAGGCGAGGCAGCTTGAGTTAAACGAAC
 30 GTACTTGCAAGATGTGACAAGCCGAGGCGGTGAGCCGGGCAGGAGGAAGGAGCCT
 CCCTCAGGGTTTCGGGAACCAGATCTCTCACCAGGAAAGACTGATACAGAACGA
 TCGATACAGAAACCACGCTGCCGCCACCACACCATCACCATCGACAGAACAGTC
 CTTAATCCAGAAACCTGAAATGAAGGAAGAGGAGACTCTGCGCAGAGCACTTTG
 GGTCCGGAGGGCGAGACTCCGGCGGAAGCATTCCCGGGCGGGTGACCCAGCACG
 35 GTCCCTCTTGGAATTGGATTGCGCCATTTTATTTTCTTGCTGCTAAATCACCGAGC
 CCGGAAGATTAGAGAGTTTTATTTCTGGGATTCTGTAGACACACCGCGGCCGCC
 AGCACACTG

SEQ ID NO: 54

>3014785H1

GCTCAACCCCTCTGGGCACCAACCCTGCATTGCAGGTTGGCACCTTACTTCCCTG
 GGATCCCCAGAGTTGGTCCAAGGAGGGAGAGTGGGTTCTCAATACGGTACCAAA
 GATATAATCACCTAGGTTTACAAATATTTTATAGGACTCACGTAACTCACATTTAT
 ACAGCAGAAATGCTATTTTGTATGCTGTAAAGTTTTCTATCTGTGTAATTTTTTT
 45 AAGGGAAAGATTTTAATATTAACCTGGTGCT

SEQ ID NO: 55

>853668H1

CGCAGGTGGACGTCTGATTTATGAAGCTCCCCATCCACCTATCTGAGTACCTGAC
TTCTCAGGACTGACACCTACAGCATCAGGTACACAGCTTCTCCTAGCATGACTTC
GATCTGATCAGCAAACAAGAAAATTTGTCTCCCGTAGTTCTGGGGCGTGTTCACC
ACCTACAACCACAGAGCTGTCATGGCTGCCATCTCTACTTCCATCCCTGTAATTTTC
5 ACAGCCCCAG

SEQ ID NO: 56

>gi|2072500|gb|U96113.1|HSU96113 Homo sapiens Nedd-4-like ubiquitin-protein ligase
WWP1 mRNA, partial cds

10 GACTAATCATGTACCTACAAGCACTCTAGTCCAAAACCTCATGCTGCTCGTATGTA
GTTAATGGAGACAACACACCTTCATCTCCGTCTCAGGTTGCTGCCAGACCCAAAA
ATACACCAGCTCCAAAACCACTCGCATCTGAGCCTGCCGATGACACTGTAAATGG
AGAATCATCCTCATTTGCACCAACTGATAATGCGTCTGTCACGGGTACTCCAGTA
GTGTCTGAAGAAAATGCCTTGTCTCCAAATTGCACTAGTACTACTGTTGAAGATC
15 CTCCAGTTCAAGAAATACTGACTTCCTCAGAAAACAATGAATGTATTCCTTCTAC
CAGTGCAGAATTGGAATCTGAAGCTAGAAGTATATTAGAGCCTGACACCTCTAAT
TCTAGAAGTAGTTCTGCTTTTGAAGCAGCCAAATCAAGACAGCCAGATGGGTGTA
TGGATCCTGTACGGCAGCAGTCTGGGAATGCCAACACAGAAACCTTGCCATCAG
GGTGGGAACAAAGAAAAGATCCTCATGGTAGAACCTATTATGTGGATCATAATA
20 CTCGAACCTACCACATGGGAGAGACCACAACCTTTACCTCCAGGTTGGGAAAGAA
GAGTTGATGATCGTAGAAGAGTTTATTATGTGGATCATAACACCAGAACAACAA
CGTGGCAGCGGCCTACCATGGAATCTGTCCGAAATTTTGAACAGTGGCAATCTCA
GCGGAACCAATTGCAGGGAGCTATGCAACAGTTTAACCAACGATACCTCTATTTCG
GCTTCAATGTTAGCTGCAGAAAATGACCCTTATGGACCTTTGCCACCAGGCTGGG
25 AAAAAAGAGTGGATTCAACAGACAGGGTTTACTTTGTGAATCATAACACAAAAA
CAACCCAGTGGGAAGATCCAAGAACTCAAGGCTTACAGAATGAAGAACCCCTGC
CAGAAGGCTGGGAAATTAGATATACTCGTGAAGGTGTAAGGTACTTTGTTGATCA
TAACACAAGAACAACAACATTCAAAGATCCTCGCAATGGGAAGTCATCTGTAAC
TAAAGGTGGTCCACAAATTGCTTATGAACGCGGCTTTAGGTGGAAGCTTGCTCAC
30 TTCCGTTATTTGTGCCAGTCTAATGCACTACCTAGTCATGTAAAGATCAATGTGTC
CCGGCAGACATTGTTTGAAGATTCCTTCCAACAGATTATGGCATTAAAACCCTAT
GACTTGAGGAGGCGCTTATATGTAATATTTAGAGGAGAAGAAGGACTTGATTAT
GGTGGCCTAGCGAGAGAATGGTTTTTCTTGCTTTCACATGAAGTTTTGAACCCAA
TGTATTGCTTATTTGAGTATGCGGGCAAGAACAACCTATTGTCTGCAGATAAATCC
35 AGCATCAACCATTAATCCAGACCATCTTTCATACTTCTGTTTCATTGGTTCGTTTTA
TTGCCATGGCACTATTTTCATGGAAAGTTTATCGATACTGGTTTCTCTTTACCATT
TACAAGCGTATGTTAAGTAAAAAACTTACTATTAAGGATTTGGAATCTATTGATA
CTGAATTTTATAACTCCCTTATCTGGATAAGAGATAACAACATTGAAGAATGTGG
CTTAGAAATGTACTTTTCTGTTGACATGGAGATTTTGGGAAAAGTTACTTCACAT
40 GACCTGAAGTTGGGAGGTTCCAATATTCTGGTGACTGAGGAGAACAAAGATGAA
TATATTGGTTTAAATGACAGAATGGCGTTTTTCTCGAGGAGTACAAGAACAGACCA
AAGCTTTCCTTGATGGTTTTAATGAAGTTGTTTCTTCTCAGTGGCTACAGTACTTC
GATGAAAAAGAATTAGAGGTTATGTTGTGTGGCATGCAGGAGGTTGACTTGGCA
GATTGGCAGAGAAATACTGTTTATCGACATTATACAAGAAACAGCAAGCAAATC
45 ATTTGGTTTTTGGCAGTTTGTGAAAGAGACAGACAATGAAGTAAGAATGCGACTA
TTGCAGTTCGTCACTGGAACCTGCCGTTTACCTCTAGGAGGATTTGCTGAGCTCA
TGGGAAGTAATGGGCCCCCGGAATTC

SEQ ID NO: 57

>gi|1940670|gb|AA292676.1|AA292676 zt21c12.s1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:713782 3'

TTTTTTTAACGCTCCCAAGATGTCACGTTTATTGCAACTGAGCAGAGACAGGCTG
 5 TGC GGACCTTCCTCAATCCCGTCCAACCCCCAGCCCCCTCCCCAAGCCCCCGCTGC
 AACTACGCCGGCAGGTCCGCAGAGTGTTGCTTGACAGCGCGTGGCGGTGCCCCGT
 GAGTCTTAAGACACCTGCCAAGTCTCTGGCGCCGTTTCAGTCATAGGTAGAGGGAC
 TCCATGAGGGGCACTGCCCCG

SEQ ID NO: 58

>gi|13027659|gb|AF023476.2|AF023476 Homo sapiens meltrin-L precursor (ADAM12) mRNA, complete cds, alternatively spliced

CACTAACGCTCTTCCTAGTCCCCGGGCCAACTCGGACAGTTTGCTCATTATTGCA
 ACGGTCAAGGCTGGCTTGTGCCAGAACGGCGCGCGCGACGCACGCACACACA
 15 CGGGGGGAAACTTTTTTAAAAATGAAAGGCTAGAAGAGCTCAGCGGCGGCGCGG
 GCCGTGCGCGAGGGCTCCGGAGCTGACTCGCCGAGGCAGGAAATCCCTCCGGTC
 GCGACGCCCGGCCCGCTCGGCGCCCGCGTGGGATGGTGCAGCGCTCGCCGCCG
 GGCCCGAGAGCTGCTGCACTGAAGGCCGCGACGATGGCAGCGCGCCCGCTGCC
 CGTGTCCCCCGCCCGCGCCCTCCTGCTCGCCCTGGCCGGTGCTCTGCTCGCGCCCT
 20 GCGAGGCCCGAGGGGTGAGCTTATGGAACCAAGGAAGAGCTGATGAAGTTGTCA
 GTGCCTCTGTTTCGGAGTGGGGACCTCTGGATCCCAGTGAAGAGCTTCGACTCCAA
 GAATCATCCAGAAGTGCTGAATATTGACTACAACGGGAAAGCAAAGAAGTATGAT
 CATAAATCTGGAAAGAAATGAAGGTCTCATTGCCAGCAGTTTCACGGAAACCCA
 CTATCTGCAAGACGGTACTGATGTCTCCCTCGCTCGAAATTACACGGTAATTCTG
 25 GGTCACTGTTACTACCATGGACATGTACGGGGATATTCTGATTACAGCAGTCAGTC
 TCAGCACGTGTTCTGGTCTCAGGGGACTTATTGTGTTTGAAAATGAAAGCTATGT
 CTTAGAACCAATGAAAAGTGCAACCAACAGATACAAACTCTTCCCAGCGAAGAA
 GCTGAAAAGCGTCCGGGGATCATGTGGATCACATCACACACACCAAACCTCGC
 TGCAAAGAATGTGTTTCCACCACCCTCTCAGACATGGGCAAGAAGGCATAAAAG
 30 AGAGACCCTCAAGGCAACTAAGTATGTGGAGCTGGTGATCGTGGCAGACAACCG
 AGAGTTTCAGAGGCAAGGAAAAGATCTGGAAAAAGTTAAGCAGCGATTAATAGA
 GATTGCTAATCACGTTGACAAGTTTTACAGACCACTGAACATTTCGGATCGTGTTG
 GTAGGCGTGGAAGTGTGGAATGACATGGACAAATGCTCTGTAAGTCAGGACCCA
 TTCACCAGCCTCCATGAATTTCTGGACTGGAGGAAGATGAAGCTTCTACCTCGCA
 35 AATCCCATGACAATGCGCAGCTTGTCAGTGGGGTTTATTTCCAAGGGACCACCAT
 CGGCATGGCCCCAATCATGAGCATGTGCACGGCAGACCAGTCTGGGGGAATTGT
 CATGGACCATTGAGACAATCCCCTTGGTGCAGCCGTGACCCTGGCACATGAGCTG
 GGCCACAATTTCTGGGATGAATCATGACACACTGGACAGGGGCTGTAGCTGTCAA
 ATGGCGGTTGAGAAAGGAGGCTGCATCATGAACGCTTCCACCGGGTACCCATTTT
 40 CCATGGTGTTCAGCAGTTGCAGCAGGAAGGACTTGGAGACCAGCCTGGAGAAAG
 GAATGGGGGTGTGCCTGTTTAACTGCCGGAAGTCAGGGAGTCTTTCGGGGGCC
 AGAAGTGTGGGAACAGATTTGTGGAAGAAGGAGAGGAGTGTGACTGTGGGGAG
 CCAGAGGAATGTATGAATCGCTGCTGCAATGCCACCACCTGTACCCTGAAGCCG
 GACGCTGTGTGCGCACATGGGCTGTGCTGTGAAGACTGCCAGCTGAAGCCTGCA
 45 GGAACAGCGTGCAGGGACTCCAGCAACTCCTGTGACCTCCCAGAGTTCTGCACA
 GGGGCCAGCCCTCACTGCCCAGCCAACGTGTACCTGCACGATGGGCACTCATGTC
 AGGATGTGGACGGCTACTGCTACAATGGCATCTGCCAGACTCACGAGCAGCAGT
 GTGTCACACTCTGGGGACCAGGTGCTAAACCTGCCCTGGGATCTGCTTTGAGAG
 AGTCAATTCTGCAGGTGATCCTTATGGCAACTGTGGCAAAGTCTCGAAGAGTTCC

TTTGCCAAATGCGAGATGAGAGATGCTAAATGTGGAAAAATCCAGTGTC AAGGA
GGTGCCAGCCGGCCAGTCATTGGTACCAATGCCGTTTCCATAGAAACAAACATCC
CCCTGCAGCAAGGAGGCCGGATTCTGTGCCGGGGGACCCACGTGTACTTGGGCG
ATGACATGCCGGACCCAGGGCTTGTGCTTGCAGGCACAAAGTGTGCAGATGGAA
5 AAATCTGCCTGAATCGTCAATGTCAAAATATTAGTGTCTTTGGGGTTCACGAGTG
TGCAATGCAGTGCCACGGCAGAGGGGTGTGCAACAACAGGAAGAACTGCCACTG
CGAGGCCCACTGGGCACCTCCCTTCTGTGACAAGTTTGGCTTTGGAGGAAGCACA
GACAGCGGCCCCATCCGGCAAGCAGATAACCAAGGTTTAACCATAGGAATTCTG
GTGACCATCCTGTGTCTTCTTGCTGCCGGATTTGTGGTTTATCTCAAAAGGAAGA
10 CCTTGATACGACTGCTGTTTACAAATAAGAAGACCACCATTGAAAACTAAGGT
GTGTGCGCCCTTCCCGGCCACCCCGTGGCTTCCAACCCTGTCAGGCTCACCTCGG
CCACCTTGGAAGAGCCTGATGAGGAAGCCGCCAGATTCCTACCCACCGAAGGA
CAATCCCAGGAGATTGCTGCAGTGTGAGAATGTTGACATCAGCAGACCCCTCAAC
GGCCTGAATGTCCCTCAGCCCCAGTCAACTCAGCGAGTGCTTCCTCCCTCCACC
15 GGGCCCCACGTGCACCTAGCGTCCCTGCCAGACCCCTGCCAGCCAAGCCTGCACT
TAGGCAGGCCCAGGGGACCTGTAAGCCAAACCCCTCAGAAGCCTCTGCCTGC
AGATCCTCTGGCCAGAACAACCTCGGCTCACTCATGCCTTGGCCAGGACCCAGGA
CAATGGGAGACTGGGCTCCGCCTGGCACCCCTCAGACCTGCTCCACAATATCCAC
ACCAAGTGCCAGATCCACCCACACCGCCTATATTAAGTGAGAAGCCGACACCTT
20 TTTTCAACAGTGAAGACAGAAGTTTGCAGTATCTTTCAGCTCCAGTTGGAGTTTT
TGTACCAACTTTTAGGATTTTTTTTAAATGTTTAAAACATCATTACTATAAGAACTT
TGAGCTACTGCCGTGAGTGCTGTGCTGTGCTATGGTGCTCTGTCTACTTGCACAG
GTACTTGTAATTATTAATTTATGCAGAATGTTGATTACAGTGCAGTGCCTGTGTA
GTAGGCATTTTTTACCATCACTGAGTTTTTCCATGGCAGGAAGGCTTGTGTGCTTTT
25 AGTATTTTAGTGAACCTTGAAATATCCTGCTTGATGGGATTCTGGACAGGATGTGT
TTGCTTTCTGATCAAGGCCTTATTGGAAAGCAGTCCCCCACTACCCCAAGCTGT
GCTTATGGTACCAGATGCAGCTCAAGAGATCCCAAGTAGAATCTCAGTTGATTTT
CTGGATTCCCATCTCAGGCCAGAGCCAAGGGGCTTCAGGTCCAGGCTGTGTTTG
GCTTTCAGGGAGGCCCTGTGCCCTTGACAACCTGGCAGGCAGGCTCCCAGGGAC
30 ACCTGGGAGAAATCTGGCTTCTGGCCAGGAAGCTTTGGTGAGAACCTGGGTTGC
AGACAGGAATCTTAAGGTGTAGCCACACCAGGATAGAGACTGGAACACTAGACA
AGCCAGAACTTGACCCTGAGCTGACCAGCCGTGAGCATGTTTGGAAGGGGTCTG
TAGTGTCACTCAAGGCGGTGCTTGATAGAAATGCCAAGCACTTCTTTTTCTCGCT
GTCCTTTCTAGAGCACTGCCACCAGTAGGTTATTTAGCTTGGGAAAGGTGGTGTT
35 TCTGTAAGAAACCTACTGCCCAGGCACTGCAAACCGCCACCTCCCTATACTGCTT
GGAGCTGAGCAAATCACCACAACTGTAATACAATGATCCTGTATTCAGACAGA
TGAGGACTTTCCATGGGACCACAACCTATTTTCAGATGTGAACCATTAACCAGATC
TAGTCAATCAAGTCTGTTTACTGCAAGGTTCAACTTATTAACAATTAGGCAGACT
CTTTATGCTTGCAAAAACCTACAACCAATGGAATGTGATGTTTCATGGGTATAGTTC
40 ATGTCTGCTATCATTATTCGTAGATATTGGACAAAGAACCTTCTCTATGGGGCAT
CCTCTTTTCCAACCTGGCTGCAGGAATCTTTAAAAGATGCTTTTAAACAGAGTCTG
AACCTATTTCTTAAACACTTGCAACCTACCTGTTGAGCATCACAGAATGTGATAA
GGAAATCAACTTGCTTATCAACTTCCTAAATATTATGAGATGTGGCTTGGGCAGC
ATCCCTTGAACCTTCACTCTTCAAATGCCTGACTAGGGAGCCATGTTTCACAA
45 GGTCTTTAAAGTGACTAATGGCATGAGAAATACAAAAATACTCAGATAAGGTAA
AATGCCATGATGCCTCTGTCTTCTGGACTGGTTTTTCACATTAGAAGACAATTGAC
AACAGTTACATAATTCCTCTGAGTGTTTTATGAGAAAGCCTTCTTTTGGGGTCA
ACAGTTTTCTATGCTTTGAAACAGAAAAATATGTACCAAGAATCTTGGTTTGCC
TTCCAGAAAACAAACCTGCATTTCACTTTCCCGGTGTTCCCACTGTATCTAGGC

AACATAGTATTCATGACTATGGATAAACTAAACACGTGACACAAACACACACAA
 AAGGGAACCCAGCTCTAATACATTCCAACCTCGTATAGCATGCATCTGTTTATTCT
 ATAGTTATTAAGTTCTTTAAAATGTAAAGCCATGCTGGAAAATAATACTGCTGAG
 ATACATACAGAATTACTGTAAGTACACTTGGTAATTGTAATAAGCCAAAC
 5 ATATATATACTATTA AAAAGGTTTACAGAATTTTATGGTGCATTACGTGGGCATT
 GTCTTTT TAGATGCCCAAATCCTTAGATCTGGCATGTTAGCCCTTCCTCCAATTAT
 AAGAGGATATGAACCAAAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 59

10 >gi|2166296|gb|AA452627.1|AA452627 zx33f03.r1 Soares_total_fetus_Nb2HF8_9w Homo
 sapiens cDNA clone IMAGE:788285 5' similar to gb:S57498 ENDOTHELIN-1 RECEPTOR
 PRECURSOR (HUMAN);
 GGCAGTTTAATAGATGTTACTCAAAGAATTTTTTAAGAACTGTATTTTATTTTTTA
 AATGGTGTATTATTACAAGGGACCTTGAACATGTTTTGTATGTTAAATTCAAAG
 15 TAATGCTTCAATCAGATAGTTCTTTT CACAAGTTCAATCTGTTTTTCATGTAAAT
 TTTGTATGAAAAATCAATGTCAAGTACCAAATGTTAATGTATGTGTCATTTAAC
 TCTGCCTGAGACTTTCAGTGCAGTGTATATAGAAGTCTAAAACACACCTAAGAGA
 AAAAGATCGAATTTTTCAGATGATTCAGAAATTTTCATTCAGGTATTTGTAATAG
 TGACATATATATGTATATACATATCACCTCCTATTCTCTTAATTTTCTTAAAATG
 20 TTAAGTGGCAGTAAAGCTTTTTTGATCATTCCCTTTCCATATAGGAAACATAATT
 TTGAAGTGGCCAGATGAGTTTATCATGTGAGTGA AAAATTAATACCCACAAATGG
 CACCAGAACTTACGATTCTTCACTTCTTGGGGTTTTTCAGTATGAACCTAACTCCCC
 ACCCC

25 SEQ ID NO: 60

>gi|180167|gb|M58664.1|HUMCDA24A Homo sapiens CD24 signal transducer mRNA,
 complete cds
 CGGTTCTCCAAGCACCCAGCATCCTGCTAGACGCGCCGCGCACCCGACGGAGGGG
 ACATGGGCAGAGCAATGGTGGCCAGGCTCGGGCTGGGGCTGCTGCTGCTGGCAC
 30 TGCTCCTACCCACGCAGATTTATTCCAGTGAAACAACAACCTGGAACCTCAAGTAA
 CTCCTCCCAGAGTACTTCCAACCTCTGGGTTGGCCCCAAATCCAATAATGCCACC
 ACCAAGGCGGCTGGTGGTGCCTGCAGTCAACAGCCAGTCTCTTCGTGGTCTCAC
 TCTCTCTTCTGCATCTCTACTCTTAAGAGACTCAGGCCAAGAAACGTCTTCTAAAT
 TTCCCCATCTTCTAAACCCAATCCAAATGGCGTCTGGAAGTCCAATGTGGCAAGG
 35 AAAAACAGGTCTTCATCGAATCTACTAATTCCACACCTTTTATTGACACAGAAAA
 TGTTGAGAATCCCAAATTTGATTGATTTGAAGAACATGTGAGAGGTTTGACTAGA
 TGATGGATGCCAATATTAAATCTGCTGGAGTTTCATGTACAAGATGAAGGAGAG
 GCAACATCCAAAATAGTTAAGACATGATTTCCCTTGAATGTGGCTTGAGAAATATG
 GACACTTAATACTACCTTGAAAATAAGAATAGAAATAAAGGATGGGATTGTGGA
 40 ATGGAGATTCAAGTTTTCAATTTGGTGCTTAATTCTATAAGCGTATAAACAGGTAAT
 ATAAAAAGCTTCCATGATTCTATTTATATGTACATGAGAAGGAACCTCCAGGTGT
 TACTGTAATTCCTCAACGTATTGTTTCGACGGCACTAATTTAATGCCGATATACTC
 TAGATGAAGTTTTACATTGTTGAGCTATTGCTGTTCTCTTGGGAACCTGAACCTACT
 TTCCTCCTGAGGCTTTGGATTTGACATTGCATTTGACCTTTTATGTAGTAATTGAC
 45 ATGTGCCAGGGCAATGATGAATGAGAATCTACCCAGATCCAAGCATCCTGAGC
 AACTCTTGATTATCCATATTGAGTCAAATGGTAGGCATTTCCCTATCACCTGTTTCC
 ATTCAACAAGAGCACTACATTCAATTTAGCTAAACGGATTCCAAAGAGTAGAATTG
 CATTGACCACGACTAATTTCAAATGCTTTTTATTATTATTTTATAGACAGTC
 TCACTTTGTGCGCCAGGCCGGAGTGACAGTGGTGCATCTCAGATCAGTGTACCAT

TTGCCTCCCGGGCTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATT
ACAGGCACCTGCCACCATGCCCCGGCTAATTTTTGTAAATTTTAGTAGAGACAGGGT
TTCACCATGTTGCCCAGGCTGGTTTCGAACTCCTGACCTCAGGTGATCCACCCGC
CTCGGCCTCCCAAAGTGCTGGGATTACAGGCTTGAGCCCCCGCGCCCAGCCATCA
5 AAATGCTTTTTATTTCTGCATATGTTTGAATACTTTTTACAATTTAAAAAAATGAT
CTGTTTTGAAGGCAAAATTGCAAATCTTGAAATTAAGAAGGCAAAATGTAAAGG
AGTCAAACCTATAAATCAAGTATTTGGGAAGTGAAGACTGGAAGCTAATTTGCAT
AAATTCACAACTTTTATACTCTTTCTGTATATACATTTTTTTTTCTTTAAAAACA
ACTATGGATCAGAATAGCCACATTTAGAACACTTTTTGTTATCAGTCAATATTTTT
10 AGATAGTTAGAACCTGGTCCTAAGCCTAAAAGTGGGCTTGATTCTGCAGTAAATC
TTTTACAACCTGCCTCGACACACATAAACCTTTTTAAAAATAGACACTCC

SEQ ID NO: 61

>gi|2215243|gb|AA487812.1|AA487812 ab11f04.r1 Stratagene lung (#937210) Homo
15 sapiens cDNA clone IMAGE:840511 5' similar to gb:Z19554 VIMENTIN (HUMAN);
CAACGAGAAGGTGGAGCTGCAGGAGCTGAATGACCGCTTCGCCAACTACATCGA
CAAGGTGCGCTTCCTGGAGCAGCAGAATAAGATCCTGCTGGCCGAGCTCGAGCA
GCTCAAGGGCCAAGGCAAGTCGCGCCTGGGGGACCTCTACGAGGAGGAGATGCG
GGACTGCGCCGGCAGTGGACCAGCTAACCAACGACAAAGCCCGCGTCGAGGTGG
20 AGCGCGACAACCTGGCCGAGGACATCATGCGCCTCCGGGAGAAATTGCAGGAGG
AGATGCTTCAGAGAGAGGAAGCCGAAAACACCCTGCAATCTTTCAGACAGGATG
TTGACAATGCG

SEQ ID NO: 62

>gi|23910|emb|Y00757.1|HS7B2 Human mRNA for polypeptide 7B2
25 CGCTCCTCGGGCTGCCCCCTCGGTTGACAATGGTCTCCAGGATGGTCTCTACCATG
CTATCTGGCCTACTGTTTTGGCTGGCATCTGGATGGACTCCAGCATTGTGCTTACAG
CCCCCGGACCCCTGACCGGGTCTCAGAAGCAGATATCCAGAGGCTGCTTCATGGT
GTTATGGAGCAATTGGGCATTGCCAGGCCCGAGTGGAATATCCAGCTCACCAG
30 GCCATGAATCTTGTGGGCCCCCGAGAGCATTGAAGGTGGAGCTCATGAAGGACTT
CAGCATTGTTGGTCTTTTGGCAACATCCCCAACATCGTGGCAGAGTTGACTGGAG
ACAACATTCTAAGGACTTTAGTGAGGATCAGGGGTACCCAGACCCTCCAAATCC
CTGTCCTGTTGGAAAAACAGATGATGGATGTCTAGAAAACACCCCTGACACTGC
AGAGTTCAGTCGAGAGTTCAGTTGCACCAGCATCTCTTTGATCCGGAACATGAC
35 TATCCAGGCTTGGGCAAGTGGAACAAGAACTCCTTTACGAGAAGATGAAGGGA
GGAGAGAGACGAAAGCGGAGGAGTGTCAATCCATATCTACAAGGACAGAGACT
GGATAATGTTGTTGCAAAGAAGTCTGTCCCCCATTTTTTCAGATGAGGATAAGGAT
CCAGAGTAAAGAGAAGATGCTAGACGAAAACCCACATTACCTGTTAGGCCTCAG
CATGGCTTATGTGCACGTGTAAATGGAGTCCCTGTGAATGACAGCATGTTTCTTA
40 CATAGATAATTATGGATACAAAGCAGCTGTATGTAGATAGTGTATTGTCTTCACA
CCGATGATTCTGCTTTTTTGCTAAATTAGAATAAGAGCTTTTTTGTCTTGGGTTT
TAAAAATGTGAATCTGCAATGATCATAAAAATTTAAATGTGAATGTCAACAATA
AAAAGCAAGACTATGAAAGGCTCAGATTTCTTGCAAGTTTAAATGGTGTCTGAG
GTTGTACTATTTTGGCCAAGTCTGTAGAAAGCTGTCATTTGATTTTGATTATGTAG
45 TTCATCCAGCCCTTGGGCATTGTTATACACCAGTAAAGAAGGCTGTACTCAAGAG
GAGGAGCTGACACATTTCACTTGGCTGCGTCTTAATAAACATGAATGCAAGCATT
GGC

SEQ ID NO: 63

>gi|1321593|gb|L76380.1|HUMCGRPB Homo sapiens (clone HSNME29) CGRP type 1
receptor mRNA, complete cds

GCACGAGGGAACAACCTCTCTCTCTSCAGCAGAGAGTGTCACCTCCTGCTTTAGG
5 ACCATCAAGCTCTGCTAACTGAATCTCATCCTAATTGCAGGATCACATTGCAAAG
CTTTCACCTCTTTCCCACCTTGCTTGTGGGTAAATCTCTTCTGCGGAATCTCAGAAA
GTAAAGTTCCATCCTGAGAATATTTACAAAGAATTTCTTAAGAGCTGGACTGG
GTCTTGACCCCTGGAATTTAAGAAATTCTTAAAGACAATGTCAAATATGATCCAA
GAGAAAATGTGATTTGAGTCTGGAGACAATTGTGCATATCGTCTAATAATAAAA
10 ACCCATACTAGCCTATAGAAAACAATATTTGAATAATAAAAAACCCATACTAGCCT
ATAGAAAACAATATTTGAAAGATTGCTACCACTAAAAAGAAAACCTACTACAAC
TGACAAGACTGCTGCAAACCTTCAATTGGTCACCACAACCTTGACAAGGTTGCTATA
AAACAAGATTGCTACAACCTTCTAGTTTATGTTATACAGCATATTTTCATTTGGGCTT
AATGATGGAGAAAAAGTGTACCCTGTATTTTCTGGTTCTCTTGCCCTTTTTTTATGA
15 TTCTTGTTACAGCAGAATTAGAAGAGAGTCCTGAGGACTCAATTCAGTTGGGAGT
TACTAGAAATAAAATCATGACAGCTCAATATGAATGTTACCAAAGATTATGCA
AGACCCCATTCACAAGCAGAAGGCGTTTACTGCAACAGAACCTGGGATGGATG
GCTCTGCTGGAACGATGTTGCAGCAGGAAGTGAATCAATGCAGCTCTGCCCTGAT
TACTTTCAGGACTTTGATCCATCAGAAAAAGTTACAAAGATCTGTGACCAAGATG
20 GAACTGGTTTAGACATCCAGCAAGCAACAGAACATGGACAAATTATACCCAGT
GTAATGTTAACACCCACGAGAAAGTGAAGACTGCACTAAATTTGTTTTACCTGAC
CATAATTGGACACGGATTGTCTATTGCATCACTGCTTATCTCGCTTGGCATATTCT
TTTATTTCAAGAGCCTAAGTTGCCAAAGGATTACCTTACACAAAAATCTGTTCTT
CTCATTTGTTTGTAACCTCTGTTGTAACAATCATTACCTCACTGCAGTGGCCAACA
25 ACCAGGCCTTAGTAGCCACAAATCCTGTTAGTTGCAAAGTGTCCCAGTTCATTCA
TCTTTACCTGATGGGCTGTAATTACTTTTGGATGCTCTGTGAAGGCATTTACCTAC
ACACACTCATTGTGGTGGCCGTGTTGCAGAGAAGCAACATTTAATGTGGTATTA
TTTTCTTGGCTGGGGATTTCCTACTGATTCTGCTTGATACATGCCATTGCTAGAA
GCTTATATTACAATGACAATTGCTGGATCAGTTCTGATACCCATCTCCTCTACATT
30 ATCCATGGCCCAATTTGTGCTGCTTTACTGGTGAATCTTTTTTTCTTGTTAAATATT
GTACGCGTTCTCATCACCAAGTTAAAAGTTACACACCAAGCGGAATCCAATCTGT
ACATGAAAGCTGTGAGAGCTACTCTTATCTTGGTGCCATTGCTTGGCATTGAATT
TGTGCTGATTCCATGGCGACCTGAAGGAAAGATTGCAGAGGAGGTATATGACTA
CATCATGCACATCCTTATGCACTTCCAGGGTCTTTTGGTCTCTACCATTTTCTGCT
35 TCTTTAATGGAGAGGTTCAAGCAATTCTGAGAAGAACTGGAATCAATACAAAA
TCCAATTTGGAAACAGCTTTTCCAACCTCAGAAGCTCTTCGTAGTGCGTCTTACAC
AGTGTCAACAATCAGTGATGGTCCAGGTTATAGTCATGACTGTCCTAGTGAACAC
TTAAATGGAAAAAGCATCCATGATATTGAAAATGTTCTCTTAAAACCAGAAAATT
TATATAATTGAAAATAGAAGGATGGTTGTCTCACTGTTTGGTGCTTCTCCTAACTC
40 AAGGACTTGGACCCATGACTCTGTAGCCAGAAGACTTCAATATTAAATGACTTTG
GGGAATGTCATAAAGAAGAGCCTTCACATGAAATTAGTAGTGTGTTGATAAGAG
TGTAACATCCAGCTCTATGTGGGAAAAAAGAAATCCTGGTTTGTAATGTTTGTCA
GTAAATACTCCCACTATGCCTGATGTGACGCTACTAACCTGACATCACCAGTGT
GGAATTGGAGAAAAGCACAACTAACTTTTCTGAGCTGGTGTAAAGCCAGTTCAG
45 CACACCATTGATGAATTCAAACAAATGGCTGTAAAACCTAAACATACATGTTGGG
CATGATTCTACCCTTATTCSCCCCAAGAGACCTAGCTAAGGTCTATAAACATGAA
GGGAAAATTAGCTTTTAGTTTTAAACTCTTTATCCCATCTTGATTGGGGCAGTTG
ACTTTTTTTTTTTCCAGAGTGCCGTAGTCCTTTTGTAACTACCCTCTCAAATGG
ACAATACCAGAAGTGAATTATCCCTGCTGGCTTTCTTTTCTCTATGAAAAGCAAC

TGAGTACAATTGTTATGATCTACTCATTTGCTGACACATCAGTTATATCTTGTGGC
 ATATCCATTGTGGAACTGGATGAACAGGATGTATAATATGCAATCTTACTTCTA
 TATCATTAGGAAAACATCTTAGTTGATGCTACAAAACACCTTGTCAACCTCTTCC
 TGTCTTACCAAACAGTGGGAGGGAATTCCTAGCTGTAAATATAAATTTTGCCCTT
 5 CCATTTCTACTGTATAAAACAAATTAGCAATCATTTTATATAAAGAAAATCAATGA
 AGGATTTCTTATTTTCTTGGAATTTTGTAAAAAGAAATTGTGAAAAATGAGCTTG
 TAAATACTCCATTATTTTATTTTATAGTCTCAAATCAAATACATAACCTATGTA
 ATTTTAAAGCAAATATATAATGCAACAATGTGTGTATGTTAATATCTGATACTG
 TATCTGGGCTGATTTTTTAAATAAAATAGAGTCTGGAATGCT

10

SEQ ID NO: 64

>290375H1

GGNCCACCAAGAACCAGCCGCGTCTACGGCTTCATCGGCCTCTGNCTGGCTGCTG
 GGCCGCGNCTGCTGGGGATGCTGCCTTTNCTGGGCTGGAAGTGCCTGTNCGCCTT
 15 TAACCGCTGCTCCAGCCTTCTGGGGGNNTANTCCATTTTTTANNTTCTCTTCTGCC
 TGGNGATCTTNGCCGCGCTCCTGGCCACCATNATGGGNCTCTATGGGGCCATCTT
 CCGCCTGGNGCAGGCCAGCGGGCAGAAGNCCCCA

20

SEQ ID NO: 65

>gi|187522|gb|M32304.1|HUMMET Human metalloproteinase inhibitor mRNA, complete
 cds

GAATTCCGGCCCCGCCGTCCCCACCCCGCCGCCCCGCCCCGGCGAATTGCGCCCCG
 CGCCCCCTCCCCTCGCGCCCCCGAGACAAAGAGGAGAGAAAGTTTGCGCGGCCGA
 GCGGGGCAGGTGAGGAGGGTGAGCCGCGCGGGAGGGGCCCCGCCTCGGCCCCGG
 25 CTCAGCCCCCGCCCCGCGCCCCAGCCCGCCGCGCGAGCAGCGCCCCGACCCCC
 CAGCGGCGGCCCCCGCCCCAGCCCCCGGCCCGCCATGGGCGCCGCGGGCCC
 GCACCCTGCGGCTGGCGCTCGGCCTCCTGCTGCTGGCGACGCTGCTTCGCCCCGC
 CGACGCCTGCAGCTGCTCCCCGGTGCACCCGCAACAGGCGTTTTGCAATGCAGAT
 GTAGTGATCAGGGCCAAAGCGGTGAGTGAAGAAGGAAGTGGACTCTGGAAACGAC
 30 ATTTATGGCAACCCTATCAAGAGGATCCAGTATGAGATCAAGCAGATAAAGATG
 TTCAAAGGGCCTGAGAAGGATATAGAGTTTATCTACACGGCCCCCTCCTCGGCAG
 TGTGTGGGGTCTCGCTGGACGTTGGAGGAAAGAAGGAATATCTCATTGCAGGAA
 AGGCCGAGGGGGACGGCAAGATGCACATCACCTCTGTGACTTCATCGTGCCCT
 GGGACACCCTGAGCACCACCCAGAAGAAGAGCCTGAACCACAGGTACCAGATGG
 35 GCTGCGAGTGCAAGATCACGCGCTGCCCCATGATCCCGTGCTACATCTCCTCCCC
 GGACGAGTGCCCTCTGGATGGACTGGGTACAGAGAAGAACATCAACGGGGCACCA
 GGCCAAGTTCTTCGCTGCATCAAGAGAAGTGACGGCTCCTGTGCGTGGTACCGC
 GCGCGCGCGCCCCCAAGCAGGAGTTTCTCGACATCGAGGACCCATAAGCAGGC
 CTCCAACGCCCTGTGGCCAAGTGCAAAAAAGCCTCCAAGGGTTTCGACTGGTC
 40 CAGCTCTGACATCCCTTCCTGGAAACAGCATGAATAAAACACTCATCCCCGGAAT
 TC

SEQ ID NO: 66

>gi|36608|emb|X51416.1|HSSTHOR Human mRNA for steroid hormone receptor hERR1

45

AGCTCACAGCAAGTCCAGGCTAGAGGTAGAAACGTGAGAGCCCCACGGCTGGGG
 AAGATTGCCATGGGATTGGAGATGAGCTCCAAGGACAGCCCTGGCAGTCTGGAT
 GGAAGAGCTTGGGAAGATGCTCAGAAACCACAAAGTGCCTGGTGCGGTGGGAGG
 AAAACCAGAGTGTATGCTACAAGCAGCCGGCGGGCGCCGCGGAGTGAGGGGAC
 GCGGCGCGGTGGGGCGGCGCGGCCCGAGGAGGCGGCGGAGGAGGGGCCGCCCG

CGGCCCCCGGCTCACTCCGGCACTCCGGGCGGCTCGGCCCCCATGCCTGCCCGAC
CGCGCTGCCGGAGCCCCAGGTGACCAGCGCCATGTCCAGCCAGGTGGTGGGCAT
TGAGCCTCTCTACATCAAGGCAGAGCCGGCCAGCCCTGACAGTCCAAAGGGTTC
CTCGGAGACAGAGACCGAGCCTCCTGTGGCCCTGGCCCCCTGGTCCAGCTCCCACT
5 CGCTGCCTCCCAGGCCACAAGGAAGAGGAGGATGGGGAGGGGGCTGGGCCTGG
CGAGCAGGGCGGTGGGAAGCTGGTGCTCAGCTCCCTGCCCAAGCGCCTCTGCCT
GGTCTGTGGGGACGTGGCCTCCGGCTACCACTATGGTGTGGCATCCTGTGAGGCC
TGCAAAGCCTTCTTCAAGAGGACCATCCAGGGGAGCATCGAGTACAGCTGTCCG
GCCTCCAACGAGTGTGAGATCACCAAGCGGAGACGCAAGGCCTGCCAGGCCTGC
10 CGCTTCACCAAGTGCCTGCGGGTGGGCATGCTCAAGGAGGGAGTGCGCCTGGAC
CGCGTCCGGGGTGGGCGGCAGAAGTACAAGCGGCGGCCGGAGGTGGACCCACTG
CCCTTCCCGGGCCCCCTTCCCTGCTGGGCCCCCTGGCAGTCGCTGGAGGCCCCCGGA
AGACAGCAGCCCCAGTGAATGCACTGGTGTCTCATCTGCTGGTGGTTGAGCCTGA
GAAGCTCTATGCCATGCCTGACCCCGCAGGCCCTGATGGGCACCTCCCAGCCGTG
15 GCTACCCTCTGTGACCTCTTTGACCGAGAGATTGTGGTCACCATCAGCTGGGCCA
AGAGCATCCCAGGCTTCTCATCGCTGTGCTGTCTGACCAGATGTCAGTACTGCA
GAGCGTGTGGATGGAGGTGCTGGTGTGCTGGGTGTGGCCCAGCGCTCACTGCCACT
GCAGGATGAGCTGGCCTTCGCTGAGGACTTAGTCCTGGATGAAGAGGGGGGCACG
GGCAGCTGGCCTGGGGGAACTGGGGGCTGCCCTGCTGCAACTAGTGCGGCGGCT
20 GCAGGCCCTGCGGCTGGAGCGAGAGGAGTATGTTCTACTAAAGGCCTTGGCCCTT
GCCAATTCAGACTCTGTGCACATCGAAGATGAGCCGAGGCTGTGGAGCAGCTGC
GAGAAGCTCCTGCACGAGGCCCTGCTGGAGTATGAAGCCGGCCGGGCTGGCCCC
GGAGGGGGTGTGAGCGGCGGCGGGCGGGCAGGCTGCTGCTCACGCTACCGCTC
CTCCGCCAGACAGCGGGCAAAGTGCTGGCCATTTCTATGGGGTGAAGCTGGAG
25 GGCAAGGTGCCCATGCACAAGCTGTTCTTGGAGATGCTCGAGGCCATGATGGAC
TGAGGCAAGGGGTGGGACTGGTGGGGGTTCTGGCAGGACCTGCCTAGCATGGGG
TCAGCCCCAAGGGCTGGGGCGGAGCTGGGGTCTGGGCAGTGCACAGCCTGCTGG
CAGGGCCAGGGCTAATGCCATCAGCCCCTGGGAACAGGCCCCACGCCCTCTCCTC
CCCCTCCTAGGGGGTGTGAGAAGCTGGGAACGTGTGTCCAGGCTCTGGGCACAG
30 TGCTGCCCCCTTGCAAGCCATAACGGTGCCCCCAGAGTGTAGGGGGCCTTGCGGA
AGCCATAGGGGGCTGCACGGGATGCGTGGGAGGCAGAAACCTATCTCAGGGAGG
GAAGGGGATGGAGGCCAGAGTCTCCAGTGGGTGATGCTTTTGCTGCTGCTTAAT
CCTACCCCCTCTTCAAAGCAGAGTGGGACTTGGAGAGCAAAGGCCCATGCCCCCT
TCGCTCCTCCTCTCATCATTTGCATTGGGCATTAGTGTCCCCCCTGAAGCAATAA
35 CTCCAAGCAGACTCCAGCCCCTGGACCCCTGGGGTGGCCAGGGCTTCCCCATCAG
CTCCCAACGAGCCTCCTCAGGGGGTAGGAGAGCACTGCCTCTATGCCCTGCAGA
GCAATAACACTATATTTATTTTTGGGTTTGGCCAGGGAGGCGCAGGGACATGGGG
CAAGCCAGGGCCCAGAGCCCTTGGCTGTACAGAGACTCTATTTTAATGTATATTT
GCTGCAAAGAGAAACCGCTTTTGGTTTAAACCTTTAATGAGAAAAAATATATA
40 ATACCGAGCTC

SEQ ID NO: 67

>gi|37089|emb|X70340.1|HSTGFAA H.sapiens mRNA for transforming growth factor alpha
CTGGAGAGCCTGCTGCCCCGCCCGCCCGTAAAATGGTCCCCTCGGCTGGACAGCTC
45 GCCCTGTTGCTCTGGGTATTGTGTTGGCTGCGTGCCAGGCCTTGGAGAACAGCA
CGTCCCCGCTGAGTGCAGACCCGCCCGTGGCTGCAGCAGTGGTGTCCCATTTTAA
TGAAGTCCCAGATTCCCACACTCAGTTCTGCTTCCATGGAACCTGCAGGTTTTTGG
TGCAGGAGGACAAGCCAGCATGTGTCTGCCATTCTGGGTACGTTGGTGCACGCTG
TGAGCATGCGGACCTCCTGGCCGTGGTGGCTGCCAGCCAGAAGAAGCAGGCCAT

CACCGCCTTGGTGGTGGTCTCCATCGTGGCCCTGGCTGTCCTTATCATCACATGTG
TGCTGATACTGCTGCCAGGTCCGAAAACACTGTGAGTGGTGCCGGGCCCTCAT
CTGCCGGCACGAGAAGCCCAGCGCCCTCCTGAAGGGAAGAACCGCTTGCTGCCA
CTCAGAAACAGTGGTCTGAAGAGCCCAGAGGAGGAGTTTGGCCAGGTGGACTGT
5 GGCAGATCAATAAAGAAAGGCTTCTTCAGGACAGCACTGCCAGAGATGCCTGGG
TGTGCCACAGACCTTCCTACTTGGCCTGTAATCACCTGTGCAGCCTTTTGTGGGCC
TTCAAAACTCTGTCAAGAACTCCGTCTGCTTGGGGTTATTCAGTGTGACCTAGAG
AAGAAATCAGCGGACCACGATTTCAAGACTTGTAAAAAAGAAGTGCAGAGAGA
CGGACTCCTGTTACCTAGGTGAGGTGTGTGCAGCAGTTGGTGTCTGAGTCCACA
10 TGTGTGCAGTTGTCTTCTGCCAGCCATGGATTCCAGGCTATATATTTCTTTTAAAT
GGGCCACCTCCCCACAACAGAATTCTGCCCAACACAGGAGATTTCTATAGTTATT
GTTTTCTGTCATTTGCCTACTGGGGAAGAAAGTGAAGGAGGGGAAACTGTTTAAAT
ATCATATGAAGACCCTAGCTTTAAGAGAAGCTGTATCCTCTAACCACGAGACTCT
CAACCAGCCCAACATCTTCCATGGACACATGACATTGAAGACCATCCCAAGCTAT
15 CGCCACCCTTGGAGATGATGTCTTATTTATTAGATGGATAATGGTTTTTATTTTAA
TCTCTTAAGTCAATGTAAAAAGTATAAAACCCCTTCAGACTTCTACATTAATGAT
GTATGTGTTGCTGACTGAAAAGCTATACTGATTAGAAATGTCTGGCCTCTTCAAG
ACAGCTAAGGCTTGGGAAAAGTCTTCCAGGGTGCGGAGATGGAACCAGAGGCTG
GGTTACTGGTAGGAATAAAGGTAGGGGTTTCAGAAATGGTGCCATTGAAGCCACA
20 AAGCCGGTAAATGCCTCAATACGTTCTGGGAGAAAACCTTAGCAAATCCATCAGC
AGGGATCTGTCCCCTCTGTTGGGGAGAGAGGAAGAGTGTGTGTGTCTACACAGG
ATAAACCCAATACATATTGTACTGCTCAGTGATTAAATGGGTTCACTTCCTCGTG
AGCCCTCGGTAAGTATGTTTAGAAATAGAACATTAGCCACGAGCCATAGGCATTT
CAGGCCAAATCCATGAAAGGGGGACCAAGTCATTTATTTTCCATTTTGTGCTTGG
25 TTGGTTTGTGCTTTATTTTTTAAAGGAGAAGTTTAACTTTGCTATTTATTTTCGA
GCACTAGGAAAACCTATTCCAGTAATTTTTTTTTCTCATTTCATTTCAGGATGCCG
GCTTTATTAACAAAACTCTAACAAAGTCACCTCCACTATGTGGGTCTTCCTTTCCC
CTCAAGAGAAGGAGCAATTGTTCCCCTGACATCTGGGTCCATCTGACCCATGGGG
CCTGCCTGTGAGAAACAGTGGGTCCCTTCAAATACATAGTGGATAGCTCATCCCT
30 AGGAATTTTCATTAAAATTTGGAAACAGAGTAATGAAGAAATAATATATAAACT
CCTTATGTGAGGAAATGCTACTAATATCTGAAAAGTGAAAGATTTCTATGTATTA
ACTCTTAAGTGCACCTAGCTTATTACATCGTGAAAGGTACATTTAAAATATGTTA
AATTGGCTTGAAATTTTCAGAGAATTTTGTCTTCCCCTAATTCTTCTTCCTTGGTCT
GGAAGAACAAATTTCTATGAATTTTCTCTTATTTTTTTTTTATAATTCAGACAATT
35 CTATGACCCGTGTCTTCATTTTGGCACTCTTATTTAACAAATGCCACACCTGAAGC
ACTTGATCTGTTTCAGAGCTGACCCCTAGCAACGTAGTTGACACAGCTCCAGGT
TTTTAAATTACTAAAATAAGTTCAAGTTTACATCCCTTGGGCCAGATATGTGGGT
TGAGGCTTGACTGTAGCATCCTGCTTAGAGACCAATCAATGGACACTGGTTTTTA
GACCTCTATCAATCAGTAGTTAGCATCCAAGAGACTTTGCAGAGGCGTAGGAAT
40 GAGGCTGGACAGATGGCGGAACGAGAGGTTCCCTGCGAAGACTTGAGATTTAGT
GTCTGTGAATGTTCTAGTTCCCTAGGTCCAGCAAGTCACACCTGCCAGTGCCCTCA
TCCTTATGCCTGTAACACACATGCAGTGAGAGGCCTCACATATACGCCTCCCTAG
AAGTGCTTCCAAGTCAGTCCTTTGGAAACCAGCAGGTCTGAAAAAGAGGCTGC
ATCAATGCAAGCCTGGTTGGACCATTGTCCATGCCTCAGGATAGAACAGCCTGGC
45 TTATTTGGGGATTTTTCTTCTAGAAATCAAATGACTGATAAGCATTGGCTCCCTCT
GCCATTTAATGGCAATGGTAGTCTTTGGTTAGCTGCAAAAATACTCCATTTCAAG
TTAAAAATGCATCTTCTAATCCATCTCTGCAAGCTCCCTGTGTTTCCTTGCCCTTT
AGAAAATGAATTGTTCACTACAATTAGAGAATCATTTAACATCCTGACCTGGTAA
GCTGCCACACACCTGGCAGTGGGGAGCATCGCTGTTTCCAATGGCTCAGGAGAC

AATGAAAAGCCCCCATTTAAAAAAATAACAAACATTTTTTAAAAGGCCTCCAAT
 ACTCTTATGGAGCCTGGATTTTTCCCACTGCTCTACAGGCTGTGACTTTTTTTAAG
 CATCCTGACAGGAAATGTTTTCTTCTACATGGAAAGATAGACAGCAGCCAACCCT
 GATCTGGAAGACAGGGCCCCGGCTGGACACACGTGGAACCAAGCCAGGGATGG
 5 GCTGGCCATTGTGTCCCCGCAGGAGAGATGGGCAGAATGGCCCTAGAGTTCTTTT
 CCCTGAGAAAGGAGAAAAAGATGGGATTGCCACTCACCCACCCACACTGGTAAG
 GGAGGAGAATTTGTGCTTCTGGAGCTTCTCAAGGGATTGTGTTTTGCAGGTACAG
 AAAACTGCCTGTTATCTTCAAGCCAGGTTTTTCGAGGGCACATGGGTCACCAGTTG
 CTTTTTCAGTCAATTTGGCCGGGATGGACTAATGAGGCTCTAACACTGCTCAGGA
 10 GACCCCTGCCCTCTAGTTGGTTCTGGGCTTTGATCTCTTCCAACCTGCCCAGTCAC
 AGAAGGAGGAATGACTCAAATGCCCAAACCAAGAACACATTGCAGAAGTAAG
 ACAACATGTATATTTTTAAATGTTCTAACATAAGACCTGTTCTCTCTAGCCATTG
 ATTTACCAGGCTTTCTGAAAGATCTAGTGGTTCACACAGAGAGAGAGAGAGTAC
 TGAAAAAGCAACTCCTCTTCTTAGTCTTAATAATTTACTAAAATGGTCAACTTTTC
 15 ATTATCTTTATTATAATAAACCTGATGCTTTTTTTTTAGAACTCCTTACTCTGATGTC
 TGTATATGTTGCACTGAAAAGGTTAATATTTAATGTTTTAATTTATTTTGTGTGGT
 AAGTTAATTTTGATTTCTGTAATGTGTTAATGTGATTAGCAGTTATTTTCCTTAAT
 ATCTGAATTATACTTAAAGAGTAGTGAGCAATATAAGACGCAATTGTGTTTTTCA
 GTAATGTGCATTGTTATTGAGTTGTACTGTACCTTATTTGGAAGGATGAAGGAAT
 20 GAACCTTTTTTTCCTAAAAA

SEQ ID NO: 68

>1570946T6

GCACTTCACATACAGTATTTTCATTTAGTGCAACAATCCTGCAGTACTGGTCTTAA
 25 CCTAATGTTGCAAATGGGGAATCTGAGATTCAACAAGGTTAATTAGCTTGCCCGT
 AATCATAAGCACATAAATGTGATTCTCAAGGATTCCAAGGCCCTTGCTCAGTTTA
 CTGGCCATGCTGTTTTCTTGCAATTTTATGTAGGAAGAACAGGACCCAGGCATCTC
 CCTCCACCATTGACCTCCAGAGAAGAGATGACACAGTTGGAAGGGCTGTCTAAG
 ACAGACAGGAAATGGAGTTGGGGGCCAAATCTAAGTTAGGGGATCTGAGTTAGG
 30 GGAGCACTTCTCAGGAGTGAAAATGCACAGGAAAGTGGTGGCTGGAGTTGGAAG
 TGTTAGAGGCCTGAGATCTACGGTCTTGCGCTGCTACAGCACCTGCAAGTTCTAC
 TGAGCAGACA

SEQ ID NO: 69

35 >gi|2155852|gb|AA443177.1|AA443177 zx98g10.r1 Soares_NhHMPu_S1 Homo sapiens

cDNA clone IMAGE:811842 5' similar to SW:SR72_CANFA P33731 SIGNAL

RECOGNITION PARTICLE 72 KD PROTEIN ;

CAGATGTGGGATTACTAGCTGTAATTGCAAATAACATCATTACCATTAACAAGGA
 CCAAAATGTCTTTGACTCCAAGAAGAAAGTGAAATTAACCAATGCGGAAGGAGT
 40 AGAGTTTAAGCTTTCCAAGAAACAACCTACAAGCTATAGAATTTAACAAGCTTTA
 CTTGCTATGTACACAAACCAGGCTGAACAATGCCGCAAAATATCTGCCAGTTTAC
 AGTCCCAAAGTCCCGAGCATCTCTTACCTGTGTAAATCCAAGCTGCCCAGCTCTG
 CCGTGAAAAGCAGCACACAAAAGCAATAGAGCTGCTTCAGGAATTTTCAGATCA
 GCATCCAGAAAATGCAGCTGAAATTAAGCTGACCATGGCACAGTTGAAAATTTTC
 45 TCAAGGTAATATTTCTAAAGCATGTCTAATATTGAGAAGCATAGAGGAGTTAAA
 GCATAAACCAGGCATGGTATCTGCATTAGTTACCATGTATAGCCATGAAGAAGAT
 ATTGATAGTGCCATTGAGGTCTTCACACAAGCTATCCAGTGGTATCAAACCATC
 AGCCAAAATCTCCTGCTCATTG

SEQ ID NO: 70

>gi|220076|dbj|D12763.1|HUMST2M Homo sapiens mRNA for ST2 protein

ATCTCAACAACGAGTTACCAATACTTGCTCTTGATTGATAAACAGAATGGGGTTT
TGGATCTTAGCAATTCTCACAATTCTCATGTATTCCACAGCAGCAAAGTTTAGTA
5 AACAATCATGGGGCCTGGAAAATGAGGCTTTAATTGTAAGATGTCCTAGACAAG
GAAAACCTAGTTACACCGTGGATTGGTATTACTCACAAACAAACAAAAGTATTCC
CACTCAGGAAAGAAATCGTGTGTTTGCCTCAGGCCAACTTCTGAAGTTTCTACCA
GCTGAAGTTGCTGATTCTGGTATTTATACCTGTATTGTCAGAAGTCCACATTCAA
TAGGACTGGATATGCGAATGTCACCATATATAAAAAACAATCAGATTGCAATGTT
10 CCAGATTATTTGATGTATTCAACAGTATCTGGATCAGAAAAAAATTCCAAAATTT
ATTGTCCTACCATTGACCTCTACAACCTGGACAGCACCTCTTGAGTGGTTTAAGAA
TTGTCAGGCTCTTCAAGGATCAAGGTACAGGGCGCACAAAGTCATTTTGGTCATT
GATAATGTGATGACTGAGGACGCAGGTGATTACACCTGTAAATTTATACACAATG
AAAATGGAGCCAATTATAGTGTGACGGCGACCAGGTCTTCACGGTCAAGGATG
15 AGCAAGGCTTTTCTCTGTTTCCAGTAATCGGAGCCCCCTGCACAAAATGAAATAAA
GGAAGTGGAAATTGGAAAAACGCAAACCTAACTTGCTCTGCTTGTTTTGGAAA
AGGCACTCAGTTCTTGGCTGCCGTCTGTGGCAGCTTAATGGAACAAAAATTACA
GACTTTGGTGAACCAAGAATTCAACAAGAGGAAGGGCAAAATCAAAGTTTCAGC
AATGGGCTGGCTTGTCTAGACATGGTTTTAAGAATAGCTGACGTGAAGGAAGAG
20 GATTTATTGCTGCAGTACGACTGTCTGGCCCTGAATTTGCATGGCTTGAGAAGGC
ACACCGTAAGACTAAGTAGGAAAAATCCAAGTAAGGAGTGTTTCTGAGACTTTG
ATCACCTGAACCTTCTCTAGCAAGTGTAAGCAGAATGGAGTGTTGTTCCAAGAGA
TCCATCAAGACAATGGGAATGGCCTGTGCCATAAAATGTGCTTCTCTTCTCGGG
ATGTTGTTTGCTGTCTGATCTTTGTAGACTGTTCTGTTTGCTGGGAGCTTCTCTG
25 CTGCTTAAATTGTTTCGTCCTCCCCCACTCCCTCCTATCGTTGGTTTGTCTAGAACA
CTCAGCTGCTTCTTTGGTCATCCTTGTTTTCTAACTTTATGAACTCCCTCTGTGTCA
CTGTATGTGAAAGGAAATGCACCAACAACCGAAAACCTG

SEQ ID NO: 71

>gi|180670|gb|J03210.1|HUMCN4GEL Human collagenase type IV mRNA, 3' end
CCTCTGTCTCCTGGGCTGCCTGCTGAGCCACGCCGCCGCCGCGCCGTCGCCCCATC
ATCAAGTTCCCCGGCGATGTCGCCCCCAAAACGGACAAAGAGTTGGCAGTGCAA
TACCTGAACACCTTCTATGGCTGCCCAAGGAGAGCTGCAACCTGTTTGTGCTGA
AGGACACACTAAAGAAGATGCAGAAGTTCTTTGGACTGCCCCAGACAGGTGATC
35 TTGACCAGAATAACCATCGAGACCATGCGGAAGCCACGCTGCGGCAACCCAGATG
TGGCCAACCTACAACCTTCTTCCCTCGCAAGCCCAAGTGGGACAAGAACCAGATCA
CATACAGGATCATCGGCTACACACCTGATCTGGACCCAGAGACAGTGGATGATG
CCTTTGCTCGTGCCTTCCAAGTCTGGAGCGATGTGACCCCACTGCGGTTTTCTCGA
ATCCATGATGGAGAGGCAGACATCATGATCAACTTTGGCCGCTGGGAGCATGGC
40 GATGGATACCCCTTTGACGGTAAGGACGGACTCCTGGCTCATGCCTTCGCCCCAG
GCACTGGTGTGTTGGGGGAGACTCCCATTTTGATGACGATGAGCTATGGACCTTGGG
AGAAGGCCAAGTGGTCCGTGTGAAGTATGGGAACGCCGATGGGGAGTACTGCAA
GTTCCCCTTCTTGTTCAATGGCAAGGAGTACAACAGCTGCACTGATACTGGCCGC
AGCGATGGCTTCCTCTGGTGCTCCACCACCTACAACCTTTGAGAAGGATGGCAAGT
45 ACGGCTTCTGTCCCATGAAGCCCTGTTACCATGGGCGGCAACGCTGAAGGACA
GCCCTGCAAGTTTCCATTCCGCTTCCAGGGCACATCCTATGACAGCTGCACCACT
GAGGGCCGCACGGATGGCTACCGCTGGTGCGGCACCACTGAGGACTACGACCGC
GACAAGAAGTATGGCTTCTGCCCTGAGACCGCCATGTCCACTGTTGGTGGGAACT
CAGAAGGTGCCCCCTGTGTCTTCCCCTTCACTTTCCTGGGCAACAAATATGAGAG

CTGCACCAGCGCCGGCCGCGAGTGACGGAAAGATGTGGTGTGCGACCACAGCCAA
 CTACGATGACGACCGCAAGTGGGGCTTCTGCCCTGACCAAGGGTACAGCCTGTTT
 CTCGTGGCAGCCCACGAGTTTGGCCACGCCATGGGGCTGGAGCACTCCCAAGAC
 CCTGGGGCCCTGATGGCACCCATTTACACCTACACCAAGAAGTTCCGTCTGTCCC
 5 AGGATGACATCAAGGGCATTTCAGGAGCTCTATGGGGCCTCTCCTGACATTGACCT
 TGGCACCGGCCCCACCCCCACACTGGGCCCTGTCACTCCTGAGATCTGCAAACAG
 GACATTGTATTTGATGGCATCGCTCAGATCCGTGGTGAGATCTTCTTCTTCAAGG
 ACCGGTTCATTTGGCGGACTGTGACGCCACGTGACAAGCCCATGGGGCCCCCTGCT
 GGTGGCCACATTCTGGCCTGAGCTCCCGGAAAAGATTGATGCGGTATACGAGGC
 10 CCCACAGGAGGAGAAGGCTGTGTTCTTTGCAGGGAATGAATACTGGATCTACTC
 AGCCAGCACCTTGGAGCGAGGGTACCCCAAGCCACTGACCAGCCTGGGACTGCC
 CCCTGATGTCCAGCGAGTGGATGCCGCCTTTAACTGGAGCAAAAACAAGAAGAC
 ATACATCTTTGCTGGAGACAAATTCTGGAGATACAATGAGGTGAAGAAGAAAAT
 GGATCCTGGCTTCCCCAAGCTCATCGCAGATGCCTGGAATGCCATCCCCGATAAC
 15 CTGGATGCCGTCGTGGACCTGCAGGGCGGCGGTACAGCTACTTCTTCAAGGGTG
 CCTATTACCTGAAGCTGGAGAACCAGTCTGAAGAGCGTGAAGTTTGAAGCA
 TCAAATCCGACTGGCTAGGCTGCTGAGCTGGCCCTGGCTCCCACAGGCCCTTCTT
 CTCCACTGCCTTCGATACACCGGGCCTGGAGAACTAGAGAAGGACCCGGAGGGG
 CCTGGCAGCCGTGCCTTCAGCTCTACAGCTAATCAGCATTCTCACTCCTACCTGGT
 20 AATTTAAGATTCCAGAGAGTGGCTCCTCCCGGTGCCCAAGAATAGATGCTGACTG
 TACTCCTCCCAGGCGCCCCCTTCCCCCTCCAATCCCACCAACCCTCAGAGCCACCC
 CTAAAGAGATACTTTGATATTTTCAACGCAGCCCTGCTTTGGGCTGCCCTGGTGC
 TGCCACACTTCAGGCTCTTCTCCTTTTACAACCTTCTGTGGCTCACAGAACCCTTG
 GAGCCAATGGAGACTGTCTCAAGAGGGGCACTGGTGGCCCGACAGCCTGGCACAG
 25 GGCAGTGGGACAGGGCATGGCCAGGTGGCCACTCCAGACCCCTGGCTTTTCACT
 GCTGGCTGCCTTAGAACCTTTCTTACATTAGCAGTTTGCTTTGTATGCACTTTGTT
 TTTTTCTTTGGGTCTTGTTTTTTTTTTTCCACTTAGAAAATTGCATTTCTTGACAGAAG
 GACTCAGGTTGTCTGAAGTCACTGCACAGTGCATCTCAGCCCACATAGTGATGGT
 TCCCCTGTTCACTCTACTTAGCATGTCCCTACCGAGTCTCTTCTCCACTGGATGGA
 30 GGAAAACCAAGCCGTGGCTTCCCGCTCAGCCCTCCCTGCCCCCTCCCTTCAACCAT
 TCCCCATGGGAAATGTCAACAAGTATGAATAAAGACACCTACTGAGTGGC

SEQ ID NO: 72

>gi|34411|emb|X52941.1|HSLTFR Human LTF mRNA for lactoferrin (lactotransferrin)

35 CTTGTCTTCCTCGTCCTGCTGTTTCCTCGGGGCCCTCGGACTGTGTCTGGCTGGCCG
 TAGGAGAAGGAGTGTTTCAGTGGTGCGCCGTATCCCAACCCGAGGCCACAAAATG
 CTTCCAATGGCAAAGGAATATGAGAAAAGTGCGTGGCCCTCCTGTCAGCTGCAT
 AAAGAGAGACTCCCCCATCCAGTGTATCCAGGCCATTGCGGAAAACAGGGCCGA
 TGCTGTGACCCTTGATGGTGGTTTCATATACGAGGCAGGCCTGGCCCCCTACAAA
 40 CTGCGACCTGTAGCGGCGGAAGTCTACGGGACCGAAAGACAGCCACGAACCTCAC
 TATTATGCCGTGGCTGTGGTGAAGAAGGGCGGCAGCTTTCAGCTGAACGAACCTG
 CAAGGTCTGAAGTCCTGCCACACAGGCCTTCGCAGGACCGCTGGATGGAATGTC
 CCTATAGGGACACTTCGTCCATTCTTGAATTGGACGGGTCCACCTGAGCCCATTG
 AGGCAGCTGTGGCCAGGTTCTTCTCAGCCAGCTGTGTTCCCGGTGCAGATAAAGG
 45 ACAGTTCCCCAACCTGTGTGCGCTGTGTGCGGGGACAGGGGAAAACAAATGTGC
 CTTCTCCTCCCAGGAACCGTACTTCAGCTACTCTGGTGCCTTCAAGTGTCTGAGA
 GACGGGGCTGGAGACGTGGCTTTTATCAGAGAGAGCACAGTGTTTGAGGACCTG
 TCAGACGAGGCTGAAAGGGACGAGTATGAGTTACTCTGCCAGACAACACTCGG
 AAGCCAGTGGACAAGTTCAAAGACTGCCATCTGGCCCGGGTCCCTTCTCATGCCG

TTGTGGCACGAAGTGTGAATGGCAAGGAGGATGCCATCTGGAATCTTCTCCGCCA
GGCACAGGAAAAGTTTGGAAAGGACAAGTCACCGAAATTCAGCTCTTTGGCTC
CCCTAGTGGGCAGAAAGATCTGCTGTTCAAGGACTCTGCCATTGGGTTTTTCGAGG
GTGCCCCCGAGGATAGATTCTGGGCTGTACCTTGGCTCCGGCTACTTCACTGCCA
5 TCCAGAACTTGAGGAAAAGTGAGGAGGAAGTGGCTGCCCCGGCGTGCGCGGGTGC
TGTGGTGTGCGGTGGGCGAGCAGGAGCTGCGCAAGTGTAACCAGTGGAGTGGCT
TGAGCGAAGGCAGCGTGACCTGCTCCTCGGCCCTCCACCACAGAGGACTGCATCG
CCCTGGTGTGCTGAAAGGAGAAGCTGATGCCATGAGTTTGGATGGAGGATATGTGT
ACACTGCAGGCAAATGTGGTTTTGGTGCCTGTCCTGGCAGAGAACTACAAATCCCA
10 ACAAAGCAGTGACCCTGATCCTAACTGTGTGGATAGACCTGTGGAAGGATATCTT
GCTGTGGCGGTGGTTAGGAGATCAGACACTAGCCTTACCTGGAACCTCTGTGAAA
GGCAAGAAGTCCTGCCACACCGCCGTGGACAGGACTGCAGGCTGGAATATCCCC
ATGGGCCTGCTCTTCAACCAGACGGGCTCCTGCAAATTTGATGAATATTTAGTC
AAAGCTGTGCCCCCTGGGTCTGACCCGAGATCTAATCTCTGTGCTCTGTGTATTGG
15 CGACGAGCAGGGTGAGAATAAGTGCGTGCCCAACAGCAACGAGAGATACTACG
GCTACACTGGGGCTTTCCGGTGCCTGGCTGAGAATGCTGGAGACGTTGCATTTGT
GAAAGATGTCAGTGTCTTGCAGAACACTGATGGAAATAACAATGAGGCATGGGC
TAAGGATTTGAAGCTGGCAGACTTTGCGCTGCTGTGCCTCGATGGCAAACGGAA
GCCTGTGACTGAGGCTAGAAGCTGCCATCTTGCCATGGCCCCGAATCATGCCGTG
20 GTGTCTCGGATGGATAAGGTGGAACGCCTGAAACAGGTGTTGCTCCACCAACAG
GCTAAATTTGGGAGAAATGGATCTGACTGCCCCGACAAAGTTTTGCTTATTCCAGT
CTGAAACCAAAAACCTTCTGTTCAATGACAACACTGAGTGTCTGGCCAGACTCCA
TGGCAAACAACATATGAAAAATATTTGGGACCACAGTATGTCGCAGGCATTAC
TAATCTGAAAAAGTGCTCAACCTCCCCCTCCTGGAAGCCTGTGAATTCCTCAGG
25 AAGTAAAACCGAAGAAGATGGCCCAGCTCCCCAAGAAAGCCTCAGCCATTCACT
GCCCCAGCTCTTCTCCCCAGGTGTGTTGGGGCCTTGGCTCCCCTGCTGAAGGTG
GGGATTGCCCATCCATCTGCTTACAATTCCCTGCTGTCTGTCTTAGCAAGAAGTAA
AATGAGAAATTTTGTGATATTC

30 SEQ ID NO: 73

>gi|36109|emb|X70040.1|HSRON H.sapiens RON mRNA for tyrosine kinase

GGATCCTCTAGGGTCCCAGCTCGCCTCGATGGAGCTCCTCCCGCCGCTGCCTCAG
TCCTTCCTGTTGCTGCTGCTGTTGCCTGCCAAGCCCGCGGCGGGCGAGGACTGGC
AGTGCCCGCGCACCCCCCTACGCGGCCTCTCGCGACTTTGACGTGAAGTACGTGGT
35 GCCAGCTTCTCCGCCGGAGGCCTGGTACAGGCCATGGTGACCTACGAGGGCGA
CAGAAATGAGAGTGCTGTGTTTGTAGCCATACGCAATCGCCTGCATGTGCTTGGG
CCTGACCTGAAGTCTGTCCAGAGCCTGGCCACGGGGCCCTGCTGGAGACCCTGGCT
GCCAGACGTGTGCAGCCTGTGGCCCAGGACCCACGGCCCTCCCGGTGACACAG
ACACAAAGGTGCTGGTGTGATCCCGCGCTGCCTGCGCTGGTCAGTTGTGGCTC
40 CAGCCTGCAGGGCCGCTGCTTCCTGCATGACCTAGAGCCCCAAGGGACAGCCGT
GCATCTGGCAGCGCCAGCCTGCCTCTTCTCAGCCCACCATAACCGGCCCCGATGAC
TGCCCCGACTGTGTGGCCAGCCATTGGGCACCCGTGTAACCTGTGGTTGAGCAAG
GCCAGGCCTCCTATTTCTACGTGGCATCCTCACTGGACGCAGCCGTGGCTGGCAG
CTTCAGCCCACGCTCAGTGTCTATCAGGCGTCTCAAGGCTGACGCCTCGGGATTCT
45 GCACCGGGCTTTGTGGCGTTGTCAAGTGTGCCCCAAGCATCTTGTCTCCTACAGTA
TTGAATACGTGCACAGCTTCCACACGGGAGCCTTCGTATACTTCCTGACTGTACA
GCCGGCCAGCGTGACAGATGATCCTAGTGCCCTGCACACAGCCTGGCACGGCTT
AGCGCCACTGAGCCAGAGTTGGGTGACTATCGGGAGCTGGTCTCCTCGACTGCAGA
TTTGCTCCAAAACGCAGGCGCCGGGGGGCCCCAGAAGGCGGACAGCCCTACCT

GTGCTGCAGGTGGCCCACTCCGCTCCAGTGGGTGCCCAACTTGCCACTGAGCTGA
GCATCGCCGAGGGGCCAGGAAGTACTATTTGGGGTCTTTGTGACTGGCAAGGATG
GTGGTCCTGGCGTGGGCCCCAACTCTGTCGTCTGTGCCTTCCCCATTGACCTGCTG
GACACACTAATTGATGAGGGTGTGGAGCGCTGTTGTGAATCCCCAGTCCATCCAG
5 GCCTCCGGCGAGGCCTCGACTTCTTCCAGTCGCCCAAGTTTTTGCCCCAACCCGCCT
GGCCTGGAAGCCCTCAGCCCCAACACCAGCTGCCGCCACTTCCCTCTGCTGGTCA
GTAGCAGCTTCTCACGTGTGGACCTATTCAATGGGCTGTTGGGACCAGTACAGGT
CACTGCATTGTATGTGACACGCCTTGACAACGTCACAGTGGCACACATGGGCACA
ATGGATGGGCGTATCCTGCAGGTGGAGCTGGTCAGGTCACTAACTACTTGCTGT
10 ATGTGTCCAACCTTCTCACTGGGTGACAGTGGGCAGCCCGTGCAGCGGGATGTCAG
TCGTCTTGGGGACCACCTACTCTTTGCCTCTGGGGACCAGGTTTTCCAGGTACCTA
TCCGAGGCCCTGGCTGCCGCCACTTCCTGACCTGTGGGCGTTGCCTAAGGGCATG
GCATTTTCATGGGCTGTGGCTGGTGTGGGAACATGTGCGGCCAGCAGAAGGAGTG
TCCTGGCTCCTGGCAACAGGACCACTGCCACCTAAGCTTACTGAGTTCACCCCC
15 CACAGTGGACCTCTAAGGGGGCAGTACAAGGCTGACCCTGTGTGGCTCCAACCTCT
ACCTTCACCCTTCTGGTCTGGTGCCTGAGGGGAACCCATCAGGTCACTGTGGGCCA
AAGTCCCTGCCGGCCACTGCCCAAGGACAGCTCAAACTCAGACCAGTGCCCCG
GAAAGACTTTGTAGAGGAGTTTGAGTGTGAACTGGAGCCCTTGGGCACCCAGGC
AGTGGGGCCTACCAACGTCAGCCTCACCGTGACTAACATGCCACCGGGCAAGCA
20 CTTCCGGGTAGACGGCACCTCCGTGCTGAGAGGCTTCTCTTTCATGGAGCCAGTG
CTGATAGCAGTGCAACCCCTCTTTGGCCACGGGCAGGAGGCACCTGTCTCACTC
TTGAAGGCCAGAGTCTGTCTGTAGGCACCAGCCGGGCTGTGCTGGTCAATGGGA
CTGAGTGTCTGCTAGCACGGGTGAGTGGGGCAGCTTTTATGTGCCACACCCCC
TGGGGCCACGGTGGCCAGTGTCCCCCTTAGCCTGCAGGTGGGGGGTGGCCAGGT
25 ACCTGGTTCCTGGACCTTCCAGTACAGAGAAGACCCTGTCGTGCTAAGCATCAGC
CCCAACTGTGGCTACATCAACTCCCACATCACCATCTGTGGCCAGCATCTAACTT
CAGCATGGCACTTAGTGCTGTCATTCCATGACGGGCTTAGGGCAGTGGAAGCA
GGTGTGAGAGGCAGCTTCCAGAGCAGCAGCTGTGCCGCCTTCCTGAATATGTGGT
CCGAGACCCCCAGGGATGGGTGGCAGGGAATCTGAGTGCCCGAGGGGATGGAGC
30 TGCTGGCTTTACACTGCCTGGCTTTGCTTCCTACCCCCACCCCATCCACCCAGTG
CCAACCTAGTTCCACTGAAGCCTGAGGAGCATGCCATTAAGTTTGAGTATATTGG
GCTGGGCGCTGTGGCTGACTGTGTGGGTATCAACGTGACCGTGGGTGGTGAGAG
CTGCCAGCACGAGTTCCGGGGGGACATGGTTGTCTGCCCCCTGCCCCCATCCCTG
CAGCTTGGCCAGGATGGTGCCCCATTGCAGGTCTGCGTAGATGGTGAATGTCATA
35 TCCTGGGTAGAGTGGTGCGGCCAGGGCCAGATGGGGTCCCACAGAGCACGCTCC
TTGGTATCCTGCTGCCTTTGCTGCTGCTTGTGGCTGCACTGGCGACTGCACTGGTC
TTCAGCTACTGGTGGCGGAGGAAGCAGCTAGTTCTTCCTCCCAACCTGAATGACC
TGGCATCCCTGGACCAGACTGCTGGAGCCACACCCCTGCCTATTCTGTACTCGGG
CTCTGACTACAGAAGTGGCCTTGCACTCCCTGCCATTGATGGTCTGGATTCCACC
40 ACTTGTGTCCATGGAGCATCCTTCTCCGATAGTGAAGATGAATCCTGTGTGCCAC
TGCTGCGGAAAGAGTCCATCCAGCTAAGGGACCTGGACTCTGCGCTCTTGGCTGA
GGTCAAGGATGTGCTGATTCCCCATGAGCGGGTGGTCACCCACAGTGACCGAGT
CATTGGCAAAGGCCACTTTGGAGTTGTCTACCACGGAGAATACATAGACCAGGC
CCAGAATCGAATCCAATGTGCCATCAAGTCACTAAGTCGCATCACAGAGATGCA
45 GCAGGTGGAGGCCTTCCTGCGAGAGGGGCTGCTCATGCGTGGCCTGAACCACCC
GAATGTGCTGGCTCTCATTGGTATCATGTTGCCACCTGAGGGCCTGCCCCATGTG
CTGCTGCCCTATATGTGCCACGGTGACCTGCTCCAGTTCATCCGCTCACCTCAGC
GGAACCCACCGTGAAGGACCTCATCAGCTTTGGCCTGCAGGTAGCCCGCGGCA
TGGAGTACCTGGCAGAGCAGAAGTTTGTGCACAGGGACCTGGCTGCGCGGAACT

GCATGCTGGACGAGTCATTACAGTCAAGGTGGCTGACTTTGGTTTGGCCCCGCGA
 CATCCTGGACAGGGAGTACTATAGTGTTCAACAGCATCGCCACGCTCGCCTACCT
 GTGAAGTGGATGGCGCTGGAGAGCCTGCAGACCTATAGATTTACCACCAAGTCT
 GATGTGTGGTCATTTGGTGTGCTGCTGTGGGAACTGCTGACACGGGGTGCCCCAC
 5 CATAACGCCACATTGACCCTTTTGACCTTACCCACTTCCTGGCCCAGGGTCGGCG
 CCTGCCCCAGCCTGAGTATTGCCCTGATTCTCTGTACCAAGTGATGCAGCAATGC
 TGGGAGGCAGACCCAGCAGTGCGACCCACCTTCAGAGTACTAGTGGGGGAGGTG
 GAGCAGATAGTGTCTGCACTGCTTGGGGACCATTATGTGCAGCTGCCAGCAACCT
 ACATGAACTTGGGCCCCAGCACCTCGCATGAGATGAATGTGCGTCCAGAACAGC
 10 CGCAGTTCTCACCCATGCCAGGGAATGTACGCCGGCCCCGGCCACTCTCAGAGCC
 TCCTCGGCCCACTTGACTTAGTTCTTGGGCTGGACCTGCTTAGCTGCCTTGAGCTA
 ACCCAAGGCTGCCTCTGGGCCATGCCAGGCCAGAGCAGTGGCCCTCCACCTTGT
 TCCTGCCCTTTAACTTTTACAGAGGCAATAGGTAAATGGGCCCATTAGGTCCCTCAC
 TCCACAGAGTGAGCCAGTGAGGGCAGTCCTGCAACATGTATTTATGGAGTGCCTG
 15 CTGTGGACCCTGTCTTCTGGGCACAGTGGACTCAGCAGTGACCACACCAACACTG
 ACCCTTGAACCAATAAAGGAACAAATGACTATTAAAGCACAAAAAAAAAAAA

SEQ ID NO: 74

>gi|180020|gb|M86511.1|HUMCD14MCA Human monocyte antigen CD14 (CD14) mRNA,
 complete cds
 20 GCCGCTGTGTAGGAAAGAAGCTAAAGCACTTCCAGAGCCTGTCCGGAGCTCAGA
 GGTTCCGAAGACTTATCGACCATGGAGCGCGCGTCTGCTTGTGCTGCTGCTGC
 TGCCGCTGGTGCACGTCTCTGCGACCACGCCAGAACCTTGTGAGCTGGACGATGA
 AGATTTCCGCTGCGTCTGCAACTTCTCCGAACCTCAGCCCGACTGGTCCGAAGCC
 25 TTCCAGTGTGTGTCTGCAGTAGAGGTGGAGATCCATGCCGGCGGTCTCAACCTAG
 AGCCGTTTCTAAAGCGCGTTCGATGCGGACGCCGACCCGCGGCAGTATGCTGACA
 CGGTCAAGGCTCTCCGCGTGCGGCGGCTCACAGTGGGAGCCGCACAGGTTCCCTG
 CTCAGCTACTGGTAGGCGCCCTGCGTGTGCTAGCGTACTCCCGCCTCAAGGAACT
 GACGCTCGAGGACCTAAAGATAACCGGCACCATGCCTCCGCTGCCTCTGGAAGC
 30 CACAGGACTTGCACCTTCCAGCTTGCGCCTACGCAACGTGTCGTGGGCGACAGGG
 CGTTCTTGGCTCGCCGAGCTGCAGCAGTGGCTCAAGCCAGGCCTCAAGGTACTGA
 GCATTGCCCAAGCACACTCGCCTGCCTTTTCTGCGAACAGGTTTCGCGCCTTCCC
 GGCCCTTACCAGCCTAGACCTGTCTGACAATCCTGGACTGGGCGAACGCGGACTG
 ATGGCGGCTCTCTGTCCCCACAAGTTCCCGGCCATCCAGAATCTAGCGCTGCGCA
 35 ACACAGGAATGGAGACGCCACAGGCGTGTGCGCCGCACTGGCGGCGGCAGGTG
 TGCAGCCCCACAGCCTAGACCTCAGCCACAACCTCGCTGCGCGCCACCGTAAACCC
 TAGCGCTCCGAGATGCATGTGGTCCAGCGCCCTGAACTCCCTCAATCTGTCGTTT
 GCTGGGCTGGAACAGGTGCCTAAAGGACTGCCAGCCAAGCTCAGAGTGCTCGAT
 CTCAGCTGCAACAGACTGAACAGGGCGCCGACGCTGACGAGCTGCCCCGAGGTG
 40 GATAACCTGACACTGGACGGGAATCCCTTCTGGTCCCTGGAAGTGCCTTCCCC
 ACGAGGGCTCAATGAACTCCGGCGTGGTCCCAGCCTGTGCACGTTTCGACCCTGTC
 GGTGGGGGTGTGCGGAACCTGGTGTGCTCCAAGGGGGCCGGGGCTTTGCCTA
 AGATCCAAGACAGAATAATGAATGGACTCAAACCTGCCTTGGCTTCAGGGGAGTC
 CCGTCAGGACGTTGAGGACTTTTCGACCAATTCAACCCTTTGCCCCACCTTTATTA
 45 AAATCTTAAACAACG

SEQ ID NO: 75

>gi|1118663|gb|H97778.1|H97778 yw02b02.s1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:251019 3' similar to gb:Z13009_ma1 EPITHELIAL-CADHERIN PRECURSOR (HUMAN);contains Alu repetitive element;

5 CGTTTAACAAAATTGTTTAATAAAATTTATAAAAATGCATCTTTGAGAATACTTTT
CTCAGCTTGAATTGTTTTCTTTTCCACCCCCAAAGAAAATACACAATTATCAGC
ACCCACACATGTATACACTCAAAACTACAGTGACATTCTCTACACAGAACTATAT
TCGATATAGCTTGAAGTGCCGAAAAATCAAGACAATTCCAAAAAGTGATTGCAG
GGTTGATTTTTTTCTCCAAAACACTTTGAGAAACACGTAAAGCTATTTCAACAAA
10 AGTCTTTTCTTTGATTGTCAAAAGTTGAAATTCACATTTAAATAAAAAGAGATCC
AAATCAAGATCCTCACTNACCCCTACCCCTCAACTGAACCCCTTTTAGGGCCA
CATTTTCTTCTTGCTCCTAAGAAAAAAATTTGGAATTTTGAATATTCTCGGTTTTCT
T

15 SEQ ID NO: 76

>gi|452649|emb|X76180.1|HSLASNA H.sapiens mRNA for lung amiloride sensitive Na⁺ channel protein

CCGGCCAGCGGGCGGGCTCCCCAGCCAGGCCGCTGCACCTGTCAGGGGAACAAG
CTGGAGGAGCAGGACCCTAGACCTCTGCAGCCCATAACCAGGTCTCATGGAGGGG
20 AACAAAGCTGGAGGAGCAGGACTCTAGCCCTCCACAGTCCACTCCAGGGCTCATG
AAGGGGAACAAGCGTGAGGAGCAGGGGCTGGGCCCCGAACCTGCGGCGCCCCA
GCAGCCCACGGCGGAGGAGGAGGCCCTGATCGAGTTCCACCGCTCCTACCGAGA
GCTCTTCGAGTTCTTCTGCAACAACACCACCATCCACGGCGCCATCCGCCTGGTG
TGCTCCCAGCACAACCGCATGAAGACGGCCTTCTGGGCAGTGCTGTGGCTCTGCA
25 CCTTTGGCATGATGTACTGGCAATTCGGCCTGCTTTTCGGAGAGTACTTCAGCTA
CCCCGTCAGCCTCAACATCAACCTCAACTCGGACAAGCTCGTCTTCCCCGCAGTG
ACCATCTGCACCCTCAATCCCTACAGGTACCCGGAAATTAAAGAGGAGCTGGAG
GAGCTGGACCGCATCACAGAGCAGACGCTCTTTGACCTGTACAAATACAGCTCCT
TCACCACTCTCGTGCGCCGGCTCCCGCAGCCGTCGCGACCTGCGGGGGACTCTGCC
30 GCACCCCTTGACGCGCCTGAGGGTCCCGCCCCCGCCTCACGGGGGCCGTCGAGCC
CGTAGCGTGCCCTCCAGCTTGCGGGACAACAACCCCCAGGTGGACTGGAAGGAC
TGGAAGATCGGCTTCCAGCTGTGCAACCAGAACAATCGGACTGCTTCTACCAG
ACATACTCATCAGGGGTGGATGCGGTGAGGGAGTGGTACCGCTTCCACTACATC
AACATCCTGTGAGGCTGCCAGAGACTCTGCCATCCCTGGAGGAGGACACGCTG
35 GGCAACTTCATCTTCGCCTGCCGCTTCAACCAGGTCTCCTGCAACCAGGCGAATT
ACTCTCACTTCCACCACCCGATGTATGGAACTGCTATACTTTCAATGACAAGAA
CAACTCCAACCTCTGGATGTCTTCCATGCCTGGAATCAACAACGGTCTGTCCCTG
ATGCTGCGCGCAGAGCAGAATGACTTCATTCCCCTGCTGTCCACAGTGACTGGGG
CCCGGGTAATGGTGCACGGGCAGGATGAACCTGCCTTTATGGATGATGGTGGCTT
40 TAACTTGCGGCCTGGCGTGGAGACCTCCATCAGCATGAGGAAGGAAACCCTGGA
CAGACTTGGGGGCGATTATGGCGACTGCACCAAGAATGGCAGTGATGTTCTCTGTT
GAGAACCTTTACCCTTCAAAGTACACACAGCAGGTGTGTATTCACCTCCTGCTTCC
AGGAGAGCATGATCAAGGAGTGTGGCTGTGCCTACATCTTCTATCCGCGGCCCCA
GAACGTGGAGTACTGTGACTACAGAAAGCACAGTTCCTGGGGGTACTGCTACTA
45 TAAGCTCCAGGTTGACTTCTCCTCAGACCACCTGGGCTGTTTCACCAAGTGCCGG
AAGCCATGCAGCGTGACCAGCTACCAGCTCTCTGCTGGTTACTCACGATGGCCCT
CGGTGACATCCCAGGAATGGGTCTTCCAGATGCTATCGCGACAGAACAAATTACA
CCGTCAACAACAAGAGAAATGGAGTGGCCAAAGTCAACATCTTCTTCAAGGAGC
TGAACTACAAAACCAATTCTGAGTCTCCCTCTGTACGATGGTCACCCTCCTGTC

CAACCTGGGCAGCCAGTGGAGCCTGTGGTTCGGCTCCTCGGTGTTGTCTGTGGTG
 GAGATGGCTGAGCTCGTCTTTGACCTGCTGGTCATCATGTTCTCATGCTGCTCCG
 AAGGTTCCGAAGCCGATACTGGTCTCCAGGCCGAGGGGGCAGGGGTGCTCAGGA
 GGTAGCCTCCACCCTGGCATCCTCCCTCCTTCCCACTTCTGCCCCACCCCATGT
 5 CTCTGTCTTGTCCCAGCCAGGCCCTGCTCCCTCTCCAGCCTTGACAGCCCCCTCCC
 CCTGCCTATGCCACCCTGGGCCCCCGCCATCTCCAGGGGGCTCTGCAGGGGGCCA
 GTTCCTCCACCTGTCCTCTGGGGGGGGCCCTGAGAGGGAAGGAGAGGTTTCTCACA
 CCAAGGCAGATGCTCCTCTGGTGGGAGGGTGCTGGCCCTGGCAAGATTGAAGGA
 TGTGCAGGGCTTCTCTCAGAGCCGCCAACTGCCGTTGATGTGTGGAGGGGAA
 10 GCAAGATGGGTAAGGGCTCAGGAAGTTGCTCCAAGAACAGTAGCTGATGAAGCT
 GCCCAGAAGTGCCTTGGCTCCAGCCCTGTACCCCTTGGTACTGCCTCTGAACACT
 CTGGTTTCCCCACCCAACTGCGGCTAAGTCTCTTTTCCCTTGGATCAGCCAAGCG
 AAACCTTGGAGCTTTGACAAGGAACCTTTCCTAAGAAACCGCTGATAACCAGGACA
 AAACACAACCAAGGGTACACGCAGGCATGCACGGGTTCCTGCCCAGCGACGGC
 15 TTAAGCCAGCCCCCGACTGGCCTGGCCACACTGCTCTCCAGTAGCACAGATGTCT
 GCTCCTCCTCTTGAACCTGGGTGGGAAACCCCAACCAAAAGCCCCCTTTGTTACT
 TAGGCAATTCCCCCTTCCCTGACTCCCGAGGGCTAGGGCTAGAGCAGACCCGGGTA
 AGTAAAGGCAGACCCAGGGCTCCTCTAGCCTCATACCCGTGCCCTCACAGAGCC
 ATGCCCCGGCACCTCTGCCCTGTGTCTTTCATACCTCTACATGTCTGCTTGAGATA
 20 TTTCTCAGCCTGAAAGTTTCCCCAACCCTCTGCCAGAGAACTCCTATGCATCCCT
 TAGAACCCTGCTCAGACACCATTACTTTTGTGAACGCTTCTGCCACATCTTGTCTT
 CCCCCAAATTGATCACTCCGCCTTCTCCTGGGCTCCCGTAGCACACTATAACATC
 TGCTGGAGTGTTGCTGTTGCACCATACTTTCTTGTACATTTGTGTCTCCCTTCCCA
 ACTAGACTGTAAGTGCCTTGCGGTCAGGGACTGAATCTTGCCCGTTTATGTATGC
 25 TCCATGTCTAGCCCATCATCCTGCTTGGAGCAAGTAGGCAGGAGCTCAATAAATG
 TTTGTTGCATGAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 77

>gi|189537|gb|M80436.1|HUMPAFR Human platelet activating factor receptor mRNA,
 complete cds
 30 CTGGTGGCCTTTAATACCTGGCTGTTGCTGAAAGGTCTTTAGAAACGGCGCTAAC
 AGCAGGTTTGTGGAATGCCGGATCGCTCAACGGCCTGACGTGGGCAAAAACCTC
 GCCTTCCGCACCCATCATTATATTGATGCTCATTGCCGCCGCCTTACTGGTACGCC
 GGATGCGCTTGCTGGAAATGGGACACACGGTCACTGCAGCTGAAGCCGCTGCCC
 35 CTGCTACAGGCACCACCAGGACCAGCTGATCATTCCAGCCCACAGCAATGGAGC
 CACATGACTCCTCCCACATGGACTCTGAGTTCCGATACACTCTCTTCCCGATTGTT
 TACAGCATCATCTTTGTGCTCGGGGTCATTGCTAATGGCTACGTGCTGTGGGTCTT
 TGCCCGCCTGTACCCTTGCAAGAAATTCAATGAGATAAAGATCTTCATGGTGAAC
 CTCACCATGGCGGACATGCTCTTCTTGATCACCTGCCACTTTGGATTGTCTACTA
 40 CCAAAACCAGGGCAACTGGATACTCCCCAAATTCCTGTGCAACGTGGCTGGCTGC
 CTTTCTTCATCAACACCTACTGCTCTGTGGCCTTCCCTGGGCGTCATCACTTATAA
 CCGCTTCCAGGCAGTAACTCGGCCCATCAAGACTGCTCAGGCCAACACCCGCAA
 GCGTGGCATCTCTTTGTCCTTGGTCATCTGGGTGGCCATTGTGGGAGCTGCATCCT
 ACTTCCTCATCCTGGACTCCACCAACACAGTGCCCGACAGTGCTGGCTCAGGCAA
 45 CGTCACTCGCTGCTTTGAGCATTACGAGAAGGGCAGCGTGCCAGTCCTCATCATC
 CACATCTTCATCGTGTTCAAGCTTCTTCCCTGGTCTTCCCTCATCATCCTCTTCTGCAAC
 CTGGTCATCATCCGTACCTTGCTCATGCAGCCGGTGCAGCAGCAGCGCAACGCTG
 AAGTCAAGCGCCGGGCGCTGTGGATGGTGTGCACGGTCTTGGCGGTGTTTCATCAT
 CTGCTTCGTGCCCCACCACGTGGTGCAGCTGCCCTGGACCCTTGCTGAGCTGGGC

TTCCAGGACAGCAAATTCCACCAGGCCATTAATGATGCACATCAGGTCACCCTCT
 GCCTCCTTAGCACCAACTGTGTCTTAGACCCTGTTATCTACTGTTTCCTCACCAAG
 AAGTTCCGCAAGCACCTCACCGAAAAGTTCTACAGCATGCGCAGTAGCCGGA
 TGCTCCCGGGCCACCACGGATACGGTCACTGAAGTGGTTGTGCCATTCAACCAGA
 5 TCCCTGGCAATTCCCTCAAAAATTAGTCCCTGCTTCCAGGCCTGAAGTCTTCTCCT
 CCATGAACATCATGGACTGAGCTGGGGGAAGAAGGGATATCTACTGTGGTCTGG
 GCACCACCTCTGTGGGCACTGGTGGGCCATTAGATTGAGAGGCTACCTCACCTGG
 GCAGGGATGATGGCAGAGCCAGGCTGTTGGAAAATCCAGAACTCAAATGAGCCC
 CTTTCATCCGCCTGTGGGGCATACTACAGTAACTGTGACTTGATGACTTTATCTGA
 10 GTCCTTAT

SEQ ID NO: 78

>gi|1835924|gb|S82666.1|S82666 Homo sapiens serine protease-like protein mRNA,
complete cds

15 ACCAGCGGCAGACCACAGGCAGGGCAGAGGCACGTCTGGGTCCCCTCCCTCCTT
 CCTATCGGCGACTCCCAGATCCTGGCCATGAGAGCTCCGCACCTCCACCTCTCCG
 CCGCCTCTGGCGCCCCGGGCTCTGGCGAAGCTGCTGCCGCTGCTGATGGCGCAACT
 CTGGGCCGCGAGAGGCGGCGCTGCTCCCCCAAACGACACGCGCTTGGACCCCGA
 AGCCTATGGCGCCCCGTGCGCGCGCGGCTCGCAGCCCTGGCAGGTCTCGCTCTTC
 20 AACGGCCTCTCGTTCCACTGCGCGGGTGTCTGGTGGACCAGAGTTGGGTGCTGA
 CGGCCGCGCACTGCGGAAACAAGCCACTGTGGGCTCGAGTAGGGGATGATCACC
 TGCTGCTTCTTCAGGGCGAGCAGCTCCGCCGGACGACTCGCTCTGTTGTCCATCC
 CAAGTACCACCAGGGCTCAGGCCCATCCTGCCAAGGCGAACGGATGAGCACGA
 TCTCATGTTGCTAAAGCTGGCCAGGCCCCGTAGTGCCGGGGCCCCGCGTCCGGGGC
 25 CTGCAGCTTCCCTACCGCTGTGCTCAGCCCGGAGACCAGTGCCAGGTTGCTGGCT
 GGGGCACCACGGCCGCCCGGAGAGTGAAGTACAACAAGGGCCTGACCTGCTCCA
 GCATCACTATCCTGAGCCCTAAAGAGTGTGAGGTCTTCTACCCTGGCGTGGTCAC
 CAACAACATGATATGTGCTGGACTGGACCGGGGCCAGGACCCTTGCCAGAGTGA
 CTCTGGAGGCCCCCTGGTCTGTGACGAGACCCTCCAAGGCATCCTCTCGTGGGGT
 30 GTTTACCCCTGTGGCTCTGCCCAGCATCCAGCTGTCTACACCCAGATCTGCAAAT
 ACATGTCCTGGATCAATAAAGTCATAGCTCCAAGTATCCAGATGCTACGCTCCA
 GCTGATCCAGATGTTATGCTCCTGCTGATCCAGATGCCCAGAGGCTCCATCGTCC
 ATCCTCTTCCTCCCCAGTCGGCTGAACTCTCCCCTTGTCTGCACTGTTCAAACCTC
 TGCCGCCCTCCACACCTCTAAACATCTCCCCTCTCACCTCATTCCCCCACCTATCC
 35 CCATTCTCTGCCTGTACTGAAGCTGAAATGCAGGAAGTGGTGGCAAAGGTTTATT
 CCAGAGAAGCCAGGAAGCCGGTCATCACCCAGCCTCTGAGAGCAGTTACTGGGG
 TCACCCAACCTGACTTCCTCTGCCACTCCCCGCTGTGTGACTTTGGGCAAGCCAA
 GTGCCCTCTCTGAACCTCAGTTTCCTCATCTGCAAAATGGGAACAATGACGTGCC
 TACCTCTTAGACATGTTGTGAGGAGACTATGATATAACATGTGTATGTAAATCTT
 40 CATGTGATTGTCATGTAAGGCTTAACACAGTGGGTGGTGTGAGTTCTGACTAAAGGT
 TACCTGTTGTCGTGAAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 79

>gi|1859520|gb|AA234897.1|AA234897 zs36c04.s1 Soares_NhHMPu_S1 Homo sapiens
cDNA clone IMAGE:687270 3'

45 ACTCTGCTTACATTTTATAAGTTTAAGGTCAGCTGTCAAAGGATAACCTGTGGG
 GTTAGAACATATCACATTGCAACACCCTAAATTGTTTTTAATACATTAGCAATCT
 ATTGGGTCAACTGACATCCATTGTATATACTAGTTTCTTTCATGCTATTTTTATTTT
 GTTTTTTGCATTTTATCAAATGCAGGGCCCCCTTCTGATCTCACCATTTCACCAT

GCATCTTGGAATTCAGTAAGTGCATATCCTAACTTGCCCATATTCTAAATCATCTG
 GTTGGTTTTTCAGCCTAGAATTTGATACGCTTTTTAGAAATATGCCCAGAATAGAA
 AAGCTATGTTGGGGCACATGTCCTGCAAATATGGCCCTAGAAACAAGTGATATG
 GAATTTACTTGGTGAATAAGTTATAAATTCCCACT

5

SEQ ID NO: 80

>gi|927844|gb|R83000.1|R83000 yp87a05.s1 Soares fetal liver spleen 1NFLS Homo sapiens
 cDNA clone IMAGE:194384 3'

NTGAGGNTGAGAACTTTATACCACCNTTGTNACACTACACCGTGATTTTAAATCT
 10 TTAATCAAATTCCAAAGGTTATCAGCCATATTACATGCCATGATTAGCTTTCTATA
 AGCAATTTTTTTNACTGTGTACAGATCGGTGTCAATGAAATAAAAAAATAAAACT
 GTATACTAGGGCAAAGAACTTTATTAATCTTTGTTTCAAACCTGATTCCCAGGGC
 TTCTTCGGGCTTAATTAGGCTGCAAAGGAATGAATTGTGTATAAAGGCAAAAACCTG
 AAAAGGAGGCTGGCAGTGTCCAAGGGGGCTTGGGGGCTTAAAAATATTAGGAGG
 15 ATCCCAAGGATTTTATCC

SEQ ID NO: 81

>gi|31197|emb|X03363.1|HSEB2R Human c-erb-B-2 mRNA

AAGGGGAGGTAACCCTGGCCCCCTTTGGTTCGGGGCCCCGGGCAGCCGCGCGCCCC
 20 TTCCACGGGGGCCCTTTACTGCGCCGCGCGCCCCGGCCCCCACCCTCGCAGCACC
 CCGCGCCCCGCGCCCTCCCAGCCGGGTCCAGCCGGAGCCATGGGGCCGGAGCCG
 CAGTGAGCACCATGGAGCTGGCGGCCTTGTGCCGCTGGGGGCTCCTCCTCGCCCT
 CTTGCCCCCGGAGCCGCGAGCACCCAAAGTGTGCACCGGCACAGACATGAAGCT
 GCGGCTCCCTGCCAGTCCCGAGACCCACCTGGACATGCTCCGCCACCTCTACCAG
 25 GGCTGCCAGGTGGTGCAGGGAAACCTGGAACCTCACCTACCTGCCCACCAATGCC
 AGCCTGTCCTTCTGTCAGGATATCCAGGAGGTGCAGGGCTACGTGCTCATCGCTC
 ACAACCAAGTGAGGCAGGTCCCACTGCAGAGGCTGCGGATTGTGCGAGGCACCC
 AGCTCTTTGAGGACAACCTATGCCCTGGCCGTGCTAGACAATGGAGACCCGCTGA
 ACAATACCACCCCTGTACAGGGGCCTCCCCAGGAGGCCTGCGGGAGCTGCAGC
 30 TTCGAAGCCTCACAGAGATCTTGAAAGGAGGGGTCTTGATCCAGCGGAACCCCC
 AGCTCTGCTACCAGGACACGATTTTGTGGAAGGACATCTTCCACAAGAACAACC
 AGCTGGCTCTCACACTGATAGACACCAACCGCTCTCGGGCCTGCCACCCCTGTTT
 TCCGATGTGTAAGGGCTCCCGCTGCTGGGGAGAGAGTTCTGAGGATTGTCAGAG
 CCTGACGCGCACTGTCTGTGCCGGTGGCTGTGCCCGCTGCAAGGGGGCCACTGCCC
 35 ACTGACTGCTGCCATGAGCAGTGTGCTGCCGGCTGCACGGGCCCCAAGCACTCTG
 ACTGCCTGGCCTGCCTCCACTTCAACCACAGTGGCATCTGTGAGCTGCACTGCCC
 AGCCCTGGTCACCTACAACACAGACACGTTTGAGTCCATGCCCAATCCCGAGGGC
 CGGTATACATTCGGCGCCAGCTGTGTGACTGCCTGTCCCTACAACCTTTCTAC
 GGACGTGGGATCCTGCACCCTCGTCTGCCCCCTGCACAACCAAGAGGTGACAGC
 40 AGAGGATGGAACACAGCGGTGTGAGAAGTGCAGCAAGCCCTGTGCCCGAGTGTG
 CTATGGTCTGGGCATGGAGCACTTGCAGAGAGGTGAGGGCAGTTACCAGTGCCAA
 TATCCAGGAGTTTGCTGGCTGCAAGAAGATCTTTGGGAGCCTGGCATTCTGCCC
 GAGAGCTTTGATGGGGACCCAGCCTCCAACACTGCCCCGCTCCAGCCAGAGCAG
 CTCCAAGTGTGTTGAGACTCTGGAAGAGATCACAGGTTACCTATACATCTCAGCAT
 45 GGCCGGACAGCCTGCCTGACCTCAGCGTCTTCCAGAACCTGCAAGTAATCCGGG
 GACGAATTCTGCACAATGGCGCCTACTCGCTGACCCTGCAAGGGCTGGGCATCA
 GCTGGCTGGGGCTGCGCTCACTGAGGGAAGTGGGCAGTGGACTGGCCCTCATCC
 ACCATAACACCCACCTCTGCTTCGTGCACACGGTGGCCTGGGACCAGCTCTTCG
 GAACCCGCACCAAGCTCTGCTCCACACTGCCAACCGGCCAGAGGACGAGTGTGT

GGGCGAGGGCCTGGCCTGCCACCAGCTGTGCGCCCGAGGGCACTGCTGGGGTCC
AGGGCCACCCAGTGTGTCAACTGCAGCCAGTTCCTTCGGGGCCAGGAGTGCGT
GGAGGAATGCCGAGTACTGCAGGGGCTCCCCAGGGAGTATGTGAATGCCAGGCA
CTGTTTGGCGTGCCACCCTGAGTGTGAGCCCCAGAATGGCTCAGTGACCTGTTTT
5 GGACCGGAGGCTGACCAGTGTGTGGCCTGTGCCACTATAAGGACCCTCCCTTCT
GCGTGGCCCGCTGCCCCAGCGGTGTGAAACCTGACCTCTCCTACATGCCCATCTG
GAAGTTTCCAGATGAGGAGGGCGCATGCCAGCCTTGCCCCATCAACTGCACCCA
CTCCTGTGTGGACCTGGATGACAAGGGCTGCCCCGCCGAGCAGAGAGCCAGCCC
TCTGACGTCCATCATCTCTGCGGTGGTTGGCATTCTGCTGGTTCGTGGTCTTGGGGG
10 TGGTCTTTGGGATCCTCATCAAGCGACGGCAGCAGAAGATCCGGAAGTACACGA
TGCGGAGACTGCTGCAGGAAACGGAGCTGGTGGAGCCGCTGACACCTAGCGGAG
CGATGCCCAACCAGGCGCAGATGCGGATCCTGAAAGAGACGGAGCTGAGGAAG
GTGAAGGTGCTTGGATCTGGCGCTTTTGGCACAGTCTACAAGGGCATCTGGATCC
CTGATGGGGAGAATGTGAAAATTCCAGTGGCCATCAAAGTGTTGAGGGGAAAACA
15 CATCCCCCAAAGCCAACAAAGAAATCTTAGACGAAGCATACTGATGGCTGGTG
TGGGCTCCCCATATGTCTCCCGCCTTCTGGGCATCTGCCTGACATCCACGGTGCA
GCTGGTGACACAGCTTATGCCCTATGGCTGCCTCTTAGACCATGTCCGGGAAAAC
CGCGGACGCCTGGGCTCCCAGGACCTGCTGAACTGGTGTATGCAGATTGCCAAG
GGGATGAGCTACCTGGAGGATGTGCGGCTCGTACACAGGGACTTGGCCGCTCGG
20 AACGTGCTGGTCAAGAGTCCCAACCATGTCAAATTACAGACTTCGGGCTGGCTC
GGCTGCTGGACATTGACGAGACAGAGTACCATGCAGATGGGGGCAAGGTGCCCA
TCAAGTGGATGGCGCTGGAGTCCATTCTCCGCCGGCGGTTACCCACCAGAGTGA
TGTGTGGAGTTATGGTGTGACTGTGTGGGAGCTGATGACTTTTGGGGCCAAACCT
TACGATGGGATCCCAGCCCGGGAGATCCCTGACCTGCTGGAAAAGGGGGAGCGG
25 CTGCCCCAGCCCCCATCTGCACCATTGATGTCTACATGATCATGGTCAAATGTT
GGATGATTGACTCTGAATGTCGGCCAAGATTCCGGGAGTTGGTGTCTGAATTCTC
CCGCATGGCCAGGGACCCCCAGCGCTTTGTGGTCATCCAGAATGAGGACTTGGG
CCCAGCCAGTCCCTTGGACAGCACCTTCTACCGCTCACTGCTGGAGGACGATGAC
ATGGGGGACCTGGTGGATGCTGAGGAGTATCTGGTACCCACAGCGGCTTCTTCT
30 GTCCAGACCCTGCCCCGGGCGCTGGGGGCATGGTCCACCACAGGCACCGCAGCT
CATCTACCAGGAGTGGCGGTGGGGACCTGACACTAGGGCTGGAGCCCTCTGAAG
AGGAGGCCCCCAGGTCTCCACTGGCACCCCTCCGAAGGGGCTGGCTCCGATGTATT
TGATGGTGACCTGGGAATGGGGGCAGCCAAGGGGCTGCAAAGCCTCCCCACACA
TGACCCACAGCCCTCTACAGCGGTACAGTGAGGACCCACAGTACCCCTGCCCTCT
35 GAGACTGATGGCTACGTTGCCCCCTGACCTGCAGCCCCCAGCCTGAATATGTGA
ACCAGCCAGATGTTTCGGCCCCAGCCCCCTTCGCCCCGAGAGGGCCCTCTGCCTGC
TGCCCGACCTGCTGGTGCCACTCTGGAAAGGCCCAAGACTCTCTCCCCAGGGAAG
AATGGGGTCGTCAAAGACGTTTTTGCCTTTGGGGGTGCCGTGGAGAACCCCGAGT
ACTTGACACCCAGGGAGGAGCTGCCCCCTCAGCCCCACCCTCCTCCTGCCTTCAG
40 CCCAGCCTTCGACAACCTCTATTACTGGGACCAGGACCCACCAGAGCGGGGGGC
TCCACCCAGCACCTTCAAAGGGACACCTACGGCAGAGAACCACAGGTACCTGGG
TCTGGACGTGCCAGTGTGAACCAGAAGGCCAAGTCCGCAGAAGCCCTGATGTGT
CCTCAGGGAGCAGGGAAGGCCTGACTTCTGCTGGCATCAAGAGGTGGGAGGGCC
CTCCGACCACTTCCAGGGGAACCTGCCATGCCAGGAACCTGTCCTAAGGAACCTT
45 CCTTCCTGCTTGAGTTCACAGATGGCTGGAAGGGGTCCAGCCTCGTTGGAAGAGG
AACAGCACTGGGGAGTCTTTGTGGATTCTGAGGCCCTGCCCAATGAGACTCTAGG
GTCCAGTGGATGCCACAGCCCAGCTTGGCCCTTTCCTTCCAGATCCTGGGTACTG
AAAGCCTTAGGGGAAGCTGGCCTGAGAGGGGAAGCGGCCCTAAGGGAGTGTCTAA
GAACAAAAGCGACCCATTACAGAGACTGTCCCTGAAACCTAGTACTGCCCCCAT

GAGGAAGGAACAGCAATGGTGTCTAGTATCCAGGCTTTGTACAGAGTGCTTTTCTG
TTTAGTTTTTACTTTTTTTTGTGTTTTTTTAAAGATGAAATAAAGACCCAGGGG
GAG

5 SEQ ID NO: 82

>gi|927595|gb|U27109.1|HSU27109 Human prepromultimerin mRNA, complete cds

CTGCTATCAAAAAGGCCATAAGGATTTTGTCCCCAAATTTACATGAGCTACCTT
GCTTCAAACACTGAGATGAAGGGGGCAAGATTATTTGTCCTTCTTTCTAGTTTAT
GGAGTGGGGGCATTGGGCTTAACAACAGTAAGCATTCTTGGACTATACCTGAGG
10 ATGGGAACTCTCAGAAGACTATGCCTTCTGCTTCAGTTCCTCCAAATAAAATACA
AAGTTTGCAAATACTGCCAACCACTCGGGTCATGTCGGCGGAGATAGCTACAAC
CCAGAGGCAAGAACTTCTGAAGACAGTCTTCTTAAATCAACACTGCCTCCCTCAG
AAACAAGTGCACCTGCTGAGGGTGTGAGAAATCAAACCTCTCACATCCACAGAGA
AAGCAGAAGGAGTGGTCAAGTTACAGAATCTTACCCTCCCAACCAACGCTAGCA
15 TCAAGTTCAATCCTGGAGCAGAATCAGTGGTCCTTTCCAATTCTACACTGAAATT
TCTTCAGAGCTTTGCCAGAAAGTCAAATGAACAAGCAACTTCTCTAAACACAGTT
GGAGGCACTGGAGGCATTGGAGGCGTTGGAGGCACTGGAGGCGTGGGAAATCG
AGCCCCACGGGAACATACCTCAGCCGGGGTGACAGCAGTTCAGCCAAAGAAC
TGACTACCAAAAATCAAATTTTCGAAACAAGTACAGGAAAGAATTGGTGTGCTTA
20 TGTACATACCAGGTTATCTCCACAGTGACATTGGACAACCAGGTCACCTTATGTC
CCAGGTGGGAAAGGACCTTGTGGCTGGACCGGTGGATCCTGTCCTCAGAGATCTC
AGAAGATATCCAATCCTGTCTATAGGATGCAACATAAAATTGTCACCTCATTGGA
TTGGAGGTGCTGTCCTGGATACAGTGGGCCGAAATGTCAACTAAGAGCCCAGGA
ACAGCAAAGTTTGATACACACCAACCAGGCTGAAAGTCATACAGCTGTTGGCAG
25 AGGAGTAGCTGAGCAGCAGCAGCAGCAAGGCTGTGGTGACCCAGAAGTGATGCA
AAAAATGACTGATCAGGTGAACTACCAGGCAATGAACTGACTCTTCTGCAGAA
GAAGATTGACAATATTTCTTTGACTGTGAATGATGTAAGGAACACTTACTCCTCC
CTAGAAGGAAAAGTCAGCGAAGATAAAAGCAGAGAATTTCAATCTCTTCTAAAA
GGTCTAAAATCCAAAAGCATTAAATGTACTGATAAGAGACATAGTAAGAGAACAA
30 TTTAAAATTTTTCAAATGACATGCAAGAGACTGTAGCACAGCTCTTCAAGACTG
TATCAAGTCTATCAGAGGACCTCGAAAGCACCAGGCAAATAATTCAAAAAGTTA
ATGAATCTGTGGTTTCAATAGCAGCCCAGCAAAAGTTTGTGTTTGGTGCAAGAGAA
TCGGCCCACTTTGACTGATATAGTGGAAGTAAAGGAATCACATTGTGAATGTAAGG
CAAGAAATGACTCTTACATGTGAGAAGCCTATTAAAGAACTAGAAGTAAAGCAG
35 ACTCATTTAGAAGGTGCTCTAGAACAGGAACACTCAAGAAGCATTCTGTATTATG
AATCCCTCAATAAACTCTTTCTAAATTGAAGGAAGTACATGAGCAGCTTTTATC
AACTGAACAGGTATCAGACCAGAAGAATGCTCCAGCTGCTGAGTCAGTTAGCAA
TAATGTCACTGAGTACATGTCTACTTTACATGAAAATATAAAGAAGCAGAGTTTG
ATGATGCTGCAAATGTTTGAAGATTTGCACATTCAAGAAAGCAAGATTAACAATC
40 TCACCGTCTCTTTGGAGATGGAGAAAGAGTCTCTCAGAGGTGAATGTGAAGACA
TGTTATCCAAATGCAGAAATGATTTTAAATTTCAACTTAAGGACACAGAAGAGA
ATTTACATGTGTTAAATCAAACATTGGCTGAAGTTCTCTTTCCAATGGACAATAA
GATGGACAAAATGAGTGAGCAACTAAATGATTTGACTTATGATATGGAGATCCTT
CAACCCTTGCTTGAGCAGGGAGCATCACTCAGACAGACAATGACATATGAACAA
45 CCAAAGGAAGCAATAGTGATAAGGAAAAAGATAGAAAATCTGACTAGTGCTGTC
AATAGTCTAAATTTTATTATCAAAGAACTTACAAAAAGACACAACCTTACTTAGAA
ATGAAGTACAGGGTCGTGATGATGCCTTAGAAAGACGTATCAATGAATATGCCTT
AGAAATGGAAGATGGCCTCAATAAGACAATGACTATTATAAATAATGCTATTGA
TTTCATTCAAGATAACTATGCCCTAAAAGAGACTTTAAGTACTATTAAGGATAAT

AGTGAGATCCATCATAAATGTACCTCCGATATGGAACTATTTTGACATTTATTC
 CTCAGTTCCACCGTCTGAATGATTCTATTTCAGACTTTGGTCAATGACAATCAGAG
 ATATAACTTTGTTTTGCAAGTCGCCAAGACCCTTGCAAGGTATTCCCAGAGATGAG
 AAATAAATCAGTCCAACCTTCCAAAAGATGTATCAAATGTTCAATGAAACCACTT
 5 CCAAGTGAGAAAATACCAGCAAAATATGAGTCATTTGGAAGAAAAACTACTCT
 TAACTACCAAGATTTCCAAAAATTTTGAGACTCGGTTGCAAGACATTGAGTCTAA
 AGTTACCCAGACGCTCATACCTTATTATATTTTCAGTTAAAAAAGGCAGTGTAGTT
 ACAAATGAGAGAGATCAGGCTCTTCAACTGCAAGTATTAATTCAGATTTAAG
 GCGTTGGAAGCAAAATCTATCCATCTTTCAATTAACCTTCTTTTCGCTTAACAAAAAC
 10 TCTCCACGAAGTTTTAACAATGTGTACAAATGCTTCTACAAGTGTGTGAGAAGTGTG
 AATGCTACCATCCCTAAGTGGATAAAACATTCCCTGCCAGATATTCAACTTCTTC
 AGAAAGGTCTAACAGAATTTGTGGAACCAATAATTCAAATAAAAACTCAAGCTG
 CCCTATCTAATTCAACTTGTGTATAGATCGATCGTTGCCTGGTAGTCTGGCAAAT
 GTTGTCAAGTCTCAGAAGCAAGTAAAATCATTGCCAAAGAAAATTAACGCACTT
 15 AAGAAACCAACGGTAAATCTTACCACAGTCCTGATAGGCCGGACTCAAAGAAAC
 ACGGACAACATAATATATCCTGAGGAGTATTCAAGCTGTAGTCGGCATCCGTGCC
 AAAATGGGGGCACGTGCATAAATGGAAGAACTAGCTTTACCTGTGCCTGCAGAC
 ATCCTTTTACTGGTGACAACCTGCACTATCAAGCTTGTGGAAGAAAATGCTTTAGC
 TCCAGATTTTTCCAAAGGATCTTACAGATATGCACCCATGGTGGCATTTTTTTGCAT
 20 CTCATACGTATGGAATGACTATACCTGGTCCCTATCCTGTTAATAAATTGGATGTC
 AATTATGGAGCTTCATATACCCCAAGAACTGGAAAATTTAGAATTCGGTATCTTG
 GAGTATATGTTTTCAAGTACACCATCGAGTCATTTAGTGCTCATATTTCTGGATTT
 TTAGTGGTTGATGGAATAGACAAGCTTGCATTTGAGTCTGAAAATATTAACAGTG
 AAATACACTGTGATAGGGTTTTAACTGGGGATGCCTTATTAGAATTAAATTATGG
 25 GCAGGAAGTCTGGTTACGACTTGCAAAAGGAACAATTCAGCCAAGTTTCCCCCT
 GTTACTACATTTAGTGGCTATTTATTATATCGTACATAAGTTAGTATGAAAAACA
 GACTATCACCTTTATTGAGAAACAGCCAGTGTTCATTATCTTTGCTTGCACAT
 CTGCTCTGTTTTGGTTTTTCTACAGGAAATGAAAATCAACTTGTTTTTTAATATG
 AGTAAACTTGTATGTCTATTTTATAAAATTATTTGAATATTGTTTAATGTCTGAAT
 30 ATGAAAGAGTTCTTGATCCTAAAGAAATTTAGTGGCACAGAAAACAAAGTGAAT
 TTGTTAGCATAATTATTCCTATTCTTATTTCTTCATTTTAAGTCATTGCAATGGAA
 AGTAATATTATAAAACGGTAATTACAACATATTATCAGTCACAGTTTTCTTTCCA
 ATTAAACACTTAACTTTTGTTATTCCCTGTATATAAATATATAACACACATTTTCT
 AGATTCACAAATTTAAATAAATTACTCAAAAAATG

35

SEQ ID NO: 83

>gi|182984|gb|L03203.1|HUMGAS3X Human peripheral myelin protein 22 (GAS3) mRNA,
 complete cds

CGGCGCCAGCAGCGGAGCCAACGCACCCGAGTTTGTGTTTGAGGCCACCCTGAG
 40 GATCGGGACAGCTGTTCTTTGGGCTGCAGAACTCCGCTGAGCAGAACTTGCCG
 CCAGAAATGCTCCTCCTGTTGCTGAGTATCATCGTCCCTCCACGTCGCGGTGCTGGT
 GCTGCTGTTCTGCTCCACGATCGTCAGCCAATGGATCGTGGGCAATGGACACGCA
 ACTGATCTCTGGCAGAACTGTAGCACCTCTTCTCAGGAAATGTCCACCACTGTT
 TCTCATCATCACCAAACGAATGGCTGCAGTCTGTCCAGGCCACCATGATCCTGTC
 45 GATCATCTTCAGCATTCTGTCTCTGTTCTTCTGCCAACTCTTCACCTCAC
 CAAGGGGGGCAGGTTTTACATCACTGGAATCTTCCAAATTCTTGCTGGTCTGTGC
 GTGATGAGTGCTGCGGCCATCTACACGGTGAGGCACCCGGAGTGGCATCTCAAC
 TCGGATTACTCCTACGGTTTCGCCTACATCCTGGCCTGGGTGGCCTCCCCCTGGC
 CCTTCTCAGCGGTGTCATCTATGTGATCTTGCGGAAACGCGAATGAGGCGCCAG

ACGGTCTGTCTGAGGCTCTGAGCGTACATAGGGAAGGGAGGAAGGGAAACCAGA
 AAGCAGACAAAGAAAAAAGAGCTAGCCCAAAATCCCAAACCTCAAACCAAACAG
 AAAGCAGTGGAGGTGGGGGTTGCTGTTGATTGAAGATGTATATAATATCTCCGGT
 TTATAAAACCTATTTATAACACTTTTTACATATATGTACATAGTATTGTTTGCTTT
 5 TTATGTTGACCATCAGCCTCGTGTTGAGCCTTAAAGAAGTAGCTAAGGAACTTTA
 CATCCTAACAGTATAATCCAGCTCAGTATTTTTGTTTTGTTTTTTGTTTGTTTGTTT
 TGTTTTACCCAGAAATAAGATAACTCCATCTCGCCCCTTCCCTTTCATCTGAAAGA
 AGATACTCCCTCCAGTCCACCTCATTTAGAAAACCAAAGTGTGGGTAGAAACC
 CCAAATGTCCAAAAGCCCTTTTCTGGTGGGTGACCCAGTGCATCCAACAGAAACA
 10 GCCGCTGCCCAGAACCTCTGTGTGAAGCTTTACGCGCACACGGACAAAATGCCCA
 AACTGGAGCCCTTGCAAAAACACGGCTTGTGGCATTGGCATACTTGCCCTTACAG
 GTGGAGTATCTTCGTCACACATCTAAATGAGAAATCAGTGACAACAAGTCTTTGA
 AATGGTGCTATGGATTTACCATTCCCTTATTATCACTAATCATCTAAACAACCTCACT
 GGAAATCCAATTAACAATTTTACAACATAAGATAGAATGGAGACCTGAATAATT
 15 CTGTGTAATATAAATGGTTTATAACTGCTTTTGTACCTAGCTAGGCTGCTATTATT
 ACTATAATGAGTAAATCATAAAGCCTTCATCACTCCACATTTTTCTTACGGTCG
 GAGCATCAGAACAAGCGTCTAGACTCCTTGGGACCGTGAGTTCCTAGAGCTTGGC
 TGGGTCTAGGCTGTTCTGTGCCTCCAAGGACTGTCTGGCAATGACTTGTATTGGC
 CACCAACTGTAGATGTATATATGGTGCCCTTCTGATGCTAAGACTCCAGACCTTT
 20 TGTTTTTGCTTTGCATTTTCTGATTTTATACCAACTGTGTGGACTAAGATGCATTA
 AAATAAAC

SEQ ID NO: 84

>gi|2206902|gb|AA478268.1|AA478268 zu45a06.s1 Soares ovary tumor NbHOT Homo
 25 sapiens cDNA clone IMAGE:740914 3'
 GCGACCGCGCTGGGCCTCGTGTCGCTTGTCTGTCGTCCGTCCTGTGGGCGCTCTGC
 CCTGTGTCCTTCGCGTTCCTCGTTAAGCAGAAGAAGTCAGTAGTTATTCTCCCATG
 AACGTTCTTGTCTGTGTACAGTTTTTAGAACATTACAAAGGATCTGTTTGCTTAGC
 TGTCAACAAAAAGAAAACCTGAAGGAGCATTTGGAAGTCAATTTGAGGTTTTTTTT
 30 TTTTTTTTTTTTTTTTTTTTGTATGTTGGAACGTGCCCCAGAATGAGGCAGTTGGCAA
 ACTTCTCAGGACAATGAATCCTTCCCGTTTTTCTTTTATGCCACACAGTGCATTG
 TTTTTCTACCTGCTTGTCTTATTTTAG

SEQ ID NO: 85

>gi|1925839|gb|AA282906.1|AA282906 zt14h05.r1 NCI_CGAP_GCB1 Homo sapiens
 35 cDNA clone IMAGE:713145 5' similar to gb:X66733 CD44 ANTIGEN, HEMATOPOIETIC
 FORM PRECURSOR (HUMAN);
 AAAATGGTCGCTACAGCATCTCTCGGACGGAGGCCGCTGACCTCTGCAAGGCTTT
 CAATAGCACCTTGCCCACAATGGCCAGATGGAGAAAGCTCTGAGCATCGGATT
 40 TGAGACCTGCAGGTATGGGTTCATAGAAGGGCACGTGGTGATTCCCCGGATCCA
 CCCCAACTCCATCTGTGCAGCAAACAACACAGGGGTGTACATCCTCACATCCAAC
 ACCTCCAGTATGACACATATTGCTTCAATGCTTCAGCTCCACCTGAAGAAGATT
 GTACATCAGTCACAGACCTGCCCAATGCCTTTGATGGACCAATTACCATAACTAT
 TGTTAACCGTGATGGCACCCGCTATGTCCAGAAAGGAGAATACAGAACGAATCC
 45 TGAAGACATCTACCCAGCAACCCTACTGGATGATGACGTGAGCAGCGGCTCCTC
 CAGTGAAAGGAGCAGCACTTCAGGAGGTTACATCTTTTACACTTTTTTCTACTGTA
 CACCCATCCCAGACGAAGACAGTCCTTGGATCACGACAGCACAGCAGATCCTGC
 TAC

SEQ ID NO: 86

>gi|2668591|gb|U97669.1|HSU97669 Homo sapiens Notch3 (NOTCH3) mRNA, complete cds

ACGCGGCGCGGAGGCTGGCCCCGGGACGCGCCCCGGAGCCCAGGGAAGGAGGGAG
5 GAGGGGAGGGTCGCGGCCCGGCCGCCATGGGGCCGGGGGCCCCGTGGCCGCCGCCG
CCGCCGTCGCCCCGATGTCGCCGCCACCGCCACCGCCACCCGTGCGGGCGCTGCCC
CTGCTGCTGCTGCTAGCGGGGCGGGGGCTGCAGCCCCCCTTGCCTGGACGGAA
GCCCCGTGTGCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCCGGGAGGCTGCCTG
CCTGTGCCCCGCCTGGCTGGGTGGGTGAGCGGTGTCAGCTGGAGGACCCCTGTCAC
10 TCAGGCCCCCTGTGCTGGCCGTGGTGTCTGCCAGAGTTCACTGGTGGCTGGCACC
CCCGATTCTCATGCCGGTGCCCCCGTGGCTTCCGAGGCCCCTGACTGCTCCCTGCC
AGATCCCTGCCTCAGCAGCCCTTGTGCCACGGTGCCCGCTGCTCAGTGGGGCCC
GATGGACGCTTCCTCTGCTCCTGCCACCTGGCTACCAGGGCCGCAGCTGCCGAA
GCGACGTGGATGAGTGCCGGGTGGGTGAGCCCTGCCGCCATGGTGGCACCTGCC
15 TCAACACACCTGGCTCCTTCCGCTGCCAGTGTCCAGCTGGCTACACAGGGCCACT
ATGTGAGAACCCCGCGGTGCCCTGTGCGCCCTCACCATGCCGTAACGGGGGCAC
CTGCAGGCAGAGTGGCGACCTCACTTACGACTGTGCCTGTCTTCCTGGGTTTGAG
GGTCAGAATTGTGAAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAAT
GGGGGGACATGCGTGGATGGCGTCAACACCTATAACTGCCAGTGCCCTCCTGAG
20 TGGACAGGCCAGTTCTGCACGGAGGACGTGGATGAGTGTGAGCTGCAGCCCAAC
GCCTGCCACAATGGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTGCGTGT
GTGTCAATGGCTGGACAGGTGAGAGCTGCAGTCAGAATATCGATGACTGTGCCA
CAGCCGTGTGCTTCCATGGGGCCACCTGCCATGACCGCGTGGCTTCTTTCTACTGT
GCCTGCCCCATGGGCAAGACTGGCCTCCTGTGTACCTGGATGACGCCTGTGTCA
25 GCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGCCGGG
CCATTTGCACCTGTCCTCCCGGCTTCACGGGTGGGGCATGTGACCAGGATGTGGA
CGAGTGCTCTATCGGCGCCAACCCCTGCGAGCACTTGGGCAGGTGCGTGAACAC
GCAGGGCTCCTTCCTGTGCCAGTGCGGTGCTGGCTACACTGGACCTCGCTGTGAG
ACCGATGTCAACGAGTGTCTGTGCGGGGCCCTGCCGAAACCAGGCCACGTGCCTC
30 GACCGCATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTCACAGGAACCTATT
GCGAGGTGGACATTGACGAGTGTGAGAGTAGCCCCTGTGTCAACGGTGGGGTCT
GCAAGGACCGAGTCAATGGCTTCAGCTGCACCTGCCCCCTCGGGCTTCAGCGGCTC
CACGTGTGAGCTGGACGTGGACGAATGCGCCAGCACGCCCTGCAGGAATGGCGC
CAAATGCGTGGACCAAGCCGATGGCTACGAGTGCCGCTGTGCCGAGGGCTTTGA
35 GGGCACGCTGTGTGATCGCAACGTGGACGACTGCTCCCCTGACCCATGCCACCAT
GGTCGCTGCGTGGATGGCATCGCCAGCTTCTCATGTGCCTGTGCTCCTGGCTACA
CGGGCACACGCTGCGAGAGCCAGGTGGACGAATGCCGCAGCCAGCCCTGCCGCC
ATGGCGGCAAATGCCTAGACCTGGTGGACAAGTACCTCTGCCGCTGCCCTTCTGG
GACCACAGGTGTGAACTGCGAAGTGAACATTGACGACTGTGCCAGCAACCCCTG
40 CACCTTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCT
GGCTTCACAGGGCCCCCTTTGTAACGTGGAGATCAATGAGTGTGCTTCCAGCCCAT
GCGGCGAGGGAGGTTCTGTGTGGATGGGGAAAATGGCTTCCGCTGCCTCTGCCC
GCCTGGCTCCTTGCCCCCACTCTGCCTCCCCCGAGCCATCCCTGTGCCCATGAGC
CCTGCAGTCACGGCATCTGCTATGATGCACCTGGCGGGTTCCGCTGTGTGTGTA
45 GCCTGGCTGGAGTGGCCCCCGCTGCAGCCAGAGCCTGGCCCCGAGACGCCTGTGA
GTCCAGCCGTGCAGGGCCGGTGGGACATGCAGCAGCGATGGAATGGGTTTCCA
CTGCACCTGCCCCGCTGGTGTCCAGGGACGTGAGTGTGAACTCCTCTCCCCCTGC
ACCCCGAACCCTGTGAGCATGGGGGCGCTGCGAGTCTGCCCTGGCCAGCTGC
CTGTCTGCTCCTGCCCCCAGGGCTGGCAAGGCCACGATGCCAGCAGGATGTGG

ACGAGTGTGCTGGCCCCGCACCCTGTGGCCCTCATGGTATCTGCACCAACCTGGC
AGGGAGTTTCAGCTGCACCTGCCATGGAGGGTACACTGGCCCTTCCTGTGATCAG
GACATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGTGCCAAGAC
GGCGTGGGCTCCTTTTCCTGCTCCTGCCTCCCTGGTTTCGCCGGCCACGATGCGC
5 CCGCGATGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGACCTGTACCGA
CCACGTGGCCTCCTTCACCTGCACCTGCCCCGCCGGGCTACGGAGGCTTCCACTGC
GAACAGGACCTGCCCCGACTGCAGCCCCAGCTCCTGCTTCAATGGCGGGACCTGTG
TGGACGGCGTGAACCTCGTTCAGCTGCCTGTGCCGTCCCGGCTACACAGGAGCCCA
CTGCCAACATGAGGCAGACCCCTGCCTCTCGCGGCCCTGCCTACACGGGGGGCGTC
10 TGCAGCGCCGCCACCCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTCACGGGGCC
CGCAGTGCCAGACGCTGGTGGATTGGTGCAGCCGCCAGCCTTGTCAAAACGGGG
GTCGCTGCGTCCAGACTGGGGCCTATTGCCTTTGTCCCCCTGGATGGAGCGGACG
CCTCTGTGACATCCGAAGCTTGCCCTGCAGGGAGGCCGAGCCAGATCGGGGT
GCGGCTGGAGCAGCTGTGTGAGGCGGGTGGGCAGTGTGTGGATGAAGACAGCTC
15 CCACTACTGCGTGTGCCAGAGGGCCGTAAGTGGTAGCCACTGTGAGCAGGAGGT
GGACCCCTGCTTGGCCAGCCCTGCCAGCATGGGGGGACCTGCCGTGGCTATATG
GGGGGCTACATGTGTGAGTGTCTTCCCTGGCTACAATGGTGATAACTGTGAGGACG
ACGTGGACGAGTGTGCCTCCAGCCCTGCCAGCACGGGGGTTCATGCATTGACCT
CGTGGCCCGCTATCTCTGCTCCTGTCCCCAGGAACGCTGGGGGTGCTCTGCGAG
20 ATTAATGAGGATGACTGCGGCCAGGCCACCGCTGGACTCAGGGCCCCGGTGC
CTACACAATGGCACCTGCGTGGACCTGGTGGGTGGTTTCCGCTGCACCTGTCCCC
CAGGATACTGGTTTTCGCTGCGAGGCAGACATCAATGAGTGTGCTCAGGTG
CCTGCCACGCGGCACACACCCGGGACTGCCTGCAGGACCCAGGCGGAGGTTTCC
GTTGCCTTTGTGTCATGCTGGCTTCTCAGGTCCTCGCTGTCAGACTGTCTGTCTCCC
25 TGCAGTCCCAGCCATGCCAGCATGGAGGCCAGTGCCGTCTAGCCCGGGTCTCTG
GGGGTGGGCTGACCTTCACCTGTCACTGTGCCAGCCGTTCTGGGGTCCGCGTTG
CGAGCGGGTGGCGCGCTCCTGCCGGGAGCTGCAGTGCCCGGTGGGCGTCCCATG
CCAGCAGACGCCCCGCGGGCCGCGCTGCGCCTGCCCCCAGGGTTGTGCGGACC
CTCCTGCCGACGCTTCCCCGGGGTCCGCGCCGGGGGCCAGCAACGCCAGCTGCGC
30 GGCCGCCCCCTGTCTCCACGGGGGCTCCTGCCGCCCCGCGCCGCTCGCGCCCTTC
TTCCGCTGCGCTTGCGCGCAGGGCTGGACCGGGCCGCGCTGCGAGGCGCCCGCC
GCGGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCGCCGCTGCCAGGCC
AAGCGCGGGGACCAGCGCTGCGACCGCGAGTGCAACAGCCAGGCTGCGGCTGG
GACGGCGGCGACTGCTCGCTGAGCGTGGGCGACCCCTGGCGGCAATGCGAGGCG
35 CTGCACTGCTGGCGCCTCTTCAACAACAGCCGCTGCGACCCCGCCTGCAGCTCGC
CCGCTGCTCTACGACAACCTTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTG
CAACCCGGTGTACGAGAAGTACTGCGCCGACCACTTTGCCGACGGCCGCTGCGA
CCAGGGCTGCAACACGGAGGAGTGCGGCTGGGATGGGCTGGATTGTGCCAGCGA
GGTGCCCGCCCTGCTGGCCCGCGGCGTGTGGTGTCTACAGTGTCTGCTGCCGCCG
40 GAGGAGCTACTGCGTTCCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCCTGC
GCACCTCGCTGCGCTTCCGCTGGACGCGCACGGCCAGGCCATGGTCTTCCCTTA
CCACCGGCCTAGTCCTGGCTCCGAACCCCGGGCCCGTCCGGAGCTGGCCCCCGA
GGTGATCGGCTCGGTAGTAATGCTGGAGATTGACAACCGGCTCTGCCTGCAGTCG
CCTGAGAATGATCACTGCTTCCCCGATGCCAGAGCGCCGCTGACTACCTGGGAG
45 CGTTGTGACGCGGTGGAGCGCCTGGACTTCCCGTACCCACTGCGGGACGTGCGGG
GGGAGCCGCTGGAGCCTCCAGAACCCAGCGTCCCGCTGCTGCCACTGCTAGTGG
CGGGCGCTGTCTTGCTGCTGGTCACTCTCGTCTGGGTGTGATGGTGGCCCGGCG
CAAGCGCGAGCACAGCACCCCTCTGGTTCCCTGAGGGCTTCTCACTGCACAAGGAC
GTGGCCTCTGGTCAACAAGGGCCGGCGGGAACCCGTGGGCCAGGACGCGCTGGGC

ATGAAGAACATGGCCAAGGGTGAGAGCCTGATGGGGGAGGTGGCCACAGACTG
GATGGACACAGAGTGCCAGAGGCCAAGCGGCTAAAGGTAGAGGAGCCAGGCA
TGGGGGCTGAGGAGGCTGTGGATTGCCGTCACTGGACTCAACACCATCTGGTTGC
TGCTGACATCCGCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCGACGC
5 AGATGCTGATGGCATGGATGTCAATGTGCGTGGCCCAGATGGCTTCACCCCGCTA
ATGCTGGCTTCCTTCTGTGGGGGGGCTCTGGAGCCAATGCCAACTGAAGAGGATG
AGGCAGATGACACATCAGCTAGCATCATCTCCGACCTGATCTGCCAGGGGGGCTC
AGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTGCACCTGGCTGCCCCG
TTATGCCCGTGCTGATGCAGCCAAGCGGCTGCTGGATGCTGGGGCAGACACCAA
10 TGCCAGGACCACTCAGGCCGCACTCCCCTGCACACAGCTGTCACAGCCGATGCC
CAGGGTGTCTTCCAGATTCTCATCCGAAACCGCTCTACAGACTTGGATGCCCGCA
TGGCAGATGGCTCAACGGCACTGATCCTGGCGGGCCCGCCTGGCAGTAGAGGGCA
TGGTGGAAGAGCTCATCGCCAGCCATGCTGATGTCAATGCTGTGGATGAGCTTGG
GAAATCAGCCTTACACTGGGCTGCGGCTGTGAACAACGTGGAAGCCACTTTGGC
15 CCTGCTCAAAAATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACCCC
CCTATTCTTGCCCGCCCGCGAGGGCAGCTATGAGGCTGCCAAGCTGCTGTTGGAC
CACTTTGCCAACCGTGAGATCACCGACCACCTGGACAGGCTGCCGCGGGACGTA
GCCCAGGAGAGACTGCACCAGGACATCGTGCGCTTGCTGGATCAACCCAGTGGG
CCCCGCAGCCCCCCCCGGTCCCCACGGCCTGGGGCCTCTGCTCTGTCTCCAGGGG
20 CCTTCTCCCTGGCCTCAAAGCGGCACAGTCGGGGTCCAAGAAGAGCAGGAGGC
CCCCCGGGAAGGCGGGGCTGGGGCCGCAGGGGGCCCCGGGGGCGGGGCAAGAAG
CTGACGCTGGCCTGCCCGGGCCCCCTGGCTGACAGCTCGGTACGCTGTCGCCCCG
TGGACTCGCTGGACTCCCCGCGGCCTTTCGGTGGGCCCCCTGCTTCCCCTGGTGG
CTTCCCCCTTGAGGGGGCCCTATGCAGCTGCCACTGCCACTGCAGTGTCTCTGGCA
25 CAGCTTGGTGGCCAGGCCGGGCAGGTCTAGGGCGCCAGCCCCCTGGAGGATGT
GTACTCAGCCTGGGCCTGCTGAACCCTGTGGCTGTGCCCCCTCGATTGGGCCCCGGC
TGCCCCCACCTGCCCTCCAGGCCCTCGTTCCTGCTGCCACTGGCGCCGGGACC
CCAGCTGCTCAACCCAGGGACCCCCGTCTCCCCGCAGGAGCGGGCCCCCGCCTTAC
CTGGCAGTCCCAGGACATGGCGAGGAGTACCCGGTGGCTGGGGCACACAGCAGC
30 CCCCCAAAGGCCCGCTTCCTGCGGGTTCACAGTGAGCACCTTACCTGACCCCAT
CCCCGAATCCCCTGAGCACTGGGCCAGCCCCCTCACCTCCCTCCCTCTCAGACTG
GTCCGAATCCACGCCTAGCCCAGCCACTGCCACTGGGGCCATGGCCACCACCACT
GGGGCACTGCCTGCCAGCCACTTCCCTTGTCTGTTCCAGCTCCCTTGCTCAGGC
CCAGACCCAGCTGGGGCCCCAGCCGGAAGTTACCCCCAAGAGGCAAGTGTTGGC
35 CTGAGACGCTCGTCAGTTCTTAGATCTTGGGGGCCTAAAGAGACCCCCGTCTGC
CTCCTTTCTTTCTCTGTCTCTTCCCTTCCCTTTAGTCTTTTTCATCCTCTTCTTTCC
ACCAACCCTCCTGCATCCTTGCCTTGCAGCGTGACCGAGATAGGTCATCAGCCCA
GGGCTTCAGTCTTCCTTTATTTATAATGGGTGGGGGCTACCACCCACCTCTCAGT
CTTGTGAAGAGTCTGGGACCTCCTTCTTCCCCACTTCTCTCTTCCCTCATTCCTTC
40 TCTCTCCTTCTGGCCTCTCATTTCTTACACTCTGACATGAATGAATTATTATTATT
TTTCTTTTTCTTTTTTTTTTACATTTTGTATAGAAACAAATTCATTTAAACAACT
TATTATTATTATTTTTTACAAAATATATATATGGAGATGCTCCCTCCCCCTGTGAA
CCCCCAGTGCCCCCGTGGGGCTGAGTCTGTGGGCCCATTTCGGCCAAGCTGGATT
CTGTGTACCTAGTACACAGGCATGACTGGGATCCCGTGTACCGAGTACACGACCC
45 AGGTATGTACCAAGTAGGCACCCTTGGGGCGCACCCACTGGGGCCAGGGGTCTGGG
GGAGTGTGGGAGCCTCCTCCCCACCCACCTCCCTCACTTCACTGCATTCCAGA
TTGGACATGTTCCATAGCCTTGTGGGGAAGGGCCCACTGCCAACTCCCTCTGCC
CCAGCCCCACCTTGGCCATCTCCCTTTGGGAACTAGGGGGGCTGCTGGTGGGAAA
TGGGAGCCAGGGCAGATGTATGCATTCTTTATGTCCCTGTAAATGTGGGACTAC

AAGAAGAGGAGCTGCCTGAGTGGTACTTTCTCTTCCTGGTAATCCTCTGGCCCAG
CCTTATGGCAGAATAGAGGTATTTTTAGGCTATTTTTGTAATATGGCTTCTGGTCA
AAATCCCTGTGTAGCTGAATCCCAAGCCCTGCATTGTACAGCCCCCACTCCCC
TCACCACCTAATAAAGGAATAGTTAACTCAAAAAAAAAAAAAAAAAAAAAA

5

SEQ ID NO: 87

gi|36610|emb|X51417.1|HSSTHOR2 Human mRNA for steroid hormone receptor hERR2

CTCCTCCAACTGGGAATGCTAAAACGGGACTGATGGACGTGTCCGAACCTCTGCAT
CCCGGACCCCCTCGGCTACCACAACCAGTAGGTTGCTGAACCGAATGTTCGTCCGA
10 AGACAGGCACCTGGGCTCTAGCTGCGGCTCCTTCATCAAGACGGAGCCATCTAGC
CCATCCTCGGGCATTGATGCCCTCAGCCACCACAGCCCCAGCGGCTCGTCGGACG
CCAGCGGTGGCTTTGGCATGGCCCTGGGCACCCACGCCAACGGTCTGGACTCTCC
GCCTATGTTTCGACGGTGCAGGGGCTGGGAGGCAACCCGTGTGCAAGAGCTACGA
GGACTGTACTAGCGGTATCATGGAGGACTCGGCCATCAAGTGCGAGTACATGCTT
15 AACGCCATCCCCAAGCGCCTGTGCCTCGTGTGCGGGGACATTGCTTCTGGCTACC
ACTATGGAGTGGCCTCCTGCGAGGCTTGCAAGGCGTTCTTCAAGAGAACCATTCA
AGGAAACATCGAATACAGCTGCCCTGCCACCAACGAGTGTGAGATCACCAAACG
GAGGCGCAAGTCCTGTCAGGCCTGCCGGTTCATGAAATGCCTCAAAGTGGGGAT
GCTGAAGGAAGGCGTGCGCCTTGACCGGGTGCAGAGGAGCCGCCAGAAGTACAA
20 GAGACGGCTGGATTTCGGAGAACAGCCCCTACCTGAGCTTACAGATTTCCCCGCCT
GCTAAAAAGCCATTGACTAAGATTGTCTCGTATCTACTGGTGGCCGAGCCGGACA
AGCTGTACGCTATGCCTCCCGACGATGTGCCTGAAGGGGATATCAAGGCCCTGAC
CACTCTCTGTGACTTGGCAGATCGGGAGCTTGTGTTCTCATTAGCTGGGCCAAG
CACATCCCAGGTTTCTCCAACCTGACACTCGGGGACCAGATGAGCCTGCTGCAGA
25 GTGCCTGGATGGAGATCCTCATCCTGGGCATCGTGTACCGCTCGCTTCCCTATGA
TGACAAGCTGGCATAACGCGGAGGACTATATCATGGATGAGGAACACTCTCGCCT
GGTGGGGCTGCTGGAGCTTACCGAGCCATCTTGCAGCTCGTACGCAGGTACAAG
AAGCTCAAGGTGGAGAAGGAAGAGTTTGTGATGCTCAAAGCCCTGGCCCTTGCC
AACTCAGATTCAATGTACATCGAGAACCTGGAGGCTGTGCAGAAGCTTCAGGAC
30 CTGCTGCATGAGGCGCTGCAGGACTATGAGCTGAGCCAGCGCCATGAGGAGCCA
CGGAGGGCGGGCAAGCTGCTGTTGACACTGCCCCTGCTGCGGCAGACGGCAGCC
AAAGCCGTCCAGCACTTCTACAGTGTGAACTGCAGGGCAAGGTGCCCATGCAC
AACTCTTCCTGGAGATGCTGGAGGCCAAGGTGTGATGGCCCCGCATGCAGACG
GATGGACACGATCCACATGGAGACTTCCACGGCCACCAGCCTCGACTTTCTCACA
35 CCTGCATCGGGGCTCTGAGCTGTCCCAGAAGAAGGGGTTTCTTGCTTCCCTGGCCA
TGTGCAGACTCCTGGGGGGCAGCAGATGGGGAGATGGGGATGGGAGGGTGGGG
GCGGGGGGCTCATCTGTCACCCGAATTTTCTTTGGTATTTTTTTTTTCTTCTCCA
TGGGCAGTGCTAAGGCTTGGGCCGGGGCTGACTTCCCTTAGGGCTGGAGACCAC
GGGAGGAAGCATCCCTTCCTGCAAGGGATCCATTTCTGGACCACTCCATATTTAG
40 GACCTGGAGGTACCTGGATGGGCAGGGCTTAGTGCCAGGGCCCAAGAGACTTA
GATTGGGTGCTCCTGAAGGTGTTGGTATCACAGAGGGCAGGCCCTTGGAACAGG
AGGTCTCTGTGGCCTCTCCTGGGGCTCTGTGCCTCCTCAGTCTAGCTGTCTCCCTC
CCCTTCCCCCTTTCTTGTCTAGTACATCCAGCTCTCAGTGGATGCTCCTGCTAGA
GTAGCCACATCCCCACCACTAAGAGGGCCCTCCCTGCTTCCCTGCCCTACCTCA
45 GCCAGCTGAGGTAACCTCAGGACATGCACCTGGGAACTCGCTGGCTCAGAAAAG
AGTTGGGTCTTATACCCACCCTTGCCCTGTTGTTTCTCCTAATCCTCTTGGGCATGG
CGAGTCTAGAAACCTATGGA

SEQ ID NO: 88

>gi|1220312|gb|L76191.1|HUMI1R Homo sapiens interleukin-1 receptor-associated kinase (IRAK) mRNA, complete cds

CGCGGACCCGGCCGGCCAGGCCCGCGCCCGCCGCGGCCCTGAGAGGCCCCGGC
5 AGGTCCCGGCCCGGCCGGCAGCCATGGCCGGGGGGCCGGGCCCGGGGGAGC
CCGCAGCCCCCGGCCAGCACTTCTTGTACGAGGTGCCGCCCTGGGTTCATGTG
CCGCTTCTACAAAGTGATGGACGCCCTGGAGCCCGCCGACTGGTGCCAGTTCGCC
GCCCTGATCGTGCGCGACCAGACCGAGCTGCGGCTGTGCGAGCGCTCCGGGCAG
CGCACGGCCAGCGTCCTGTGGCCCTGGATCAACCGCAACGCCCGTGTGGCCGAC
10 CTCGTGCACATCCTCACGCACCTGCAGCTGCTCCGTGCGCGGGACATCATCACAG
CCTGGCACCCCTCCCGCCCCGCTTCCGTCCCCAGGCACCACTGCCCCGAGGCCAG
CAGCATCCCTGCACCCGCCGAGGCCGAGGCCTGGAGCCCCCGGAAGTTGCCATC
CTCAGCCTCCACCTTCCTCTCCCCAGCTTTTCCAGGCTCCAGACCCATTTCAGGGC
CTGAGCTCGGCCTGGTTCCAAGCCCTGCTTCCCTGTGGCCTCCACCGCCATCTCCA
15 GCCCCTTCTTCTACCAAGCCAGGCCAGAGAGCTCAGTGTCCCTCCTGCAGGGAG
CCCGCCCCCTCTCCGTTTTGCTGGCCCCCTCTGTGAGATTTCCCGGGGCACCCACAAC
TTCTCGGAGGAGCTCAAGATCGGGGAGGGTGGCTTTGGGTGCGTGTACCGGGCG
GTGATGAGGAACACGGTGTATGCTGTGAAGAGGCTGAAGGAGAACGCTGACCTG
GAGTGGACTGCAGTGAAGCAGAGCTTCCTGACCGAGGTGGAGCAGCTGTCCAGG
20 TTTCGTCACCCAAACATTGTGGACTTTGCTGGCTACTGTGCTCAGAACGGCTTCTA
CTGCCTGGTGTACGGCTTCCTGCCCAACGGCTCCCTGGAGGACCGTCTCCACTGC
CAGACCCAGGCCTGCCACCTCTCTCCTGGCCTCAGCGACTGGACATCCTTCTGG
GTACAGCCCGGGCAATTCAGTTTCTACATCAGGACAGCCCCAGCCTCATCCATGG
AGACATCAAGAGTTCCAACGTCTTCTGGATGAGAGGCTGACACCCAAGCTGGG
25 AGACTTTGGCCTGGCCCCGTTTCAGCCGCTTTGCCGGGTCCAGCCCCAGCCAGAGC
AGCATGGTGGCCCGGACACAGACAGTGCAGGGGCACCCTGGCCTACCTGCCCGAG
GAGTACATCAAGACGGGAAGGCTGGCTGTGGACACGGACACCTTCAGCTTTGGG
GTGGTAGTGCTAGAGACCTTGGCTGGTCAGAGGGCTGTGAAGACGCACGGTGCC
AGGACCAAGTATCTGAAAGACCTGGTGGAAAGAGGAGGCTGAGGAGGCTGGAGT
30 GGCTTTGAGAAGCACCCAGAGCACACTGCAAGCAGGTCTGGCTGCAGATGCCTG
GGCTGCTCCCATCGCCATGCAGATCTACAAGAAGCACCTGGACCCCAGGCCCGG
GCCCTGCCACCTGAGCTGGGCCTGGGCCTGGGCCAGCTGGCCTGCTGCTGCCTG
CACCGCCGGGCCAAAAGGAGGCCTCCTATGACCCAGGTGTACGAGAGGCTAGAG
AAGCTGCAGGCAGTGGTGGCGGGGGTGCCCGGGCATTGAGAGGCCGCCAGCTGC
35 ATCCCCCCTTCCCCGCAGGAGAACTCCTACGTGTCCAGCACTGGCAGAGCCCACA
GTGGGGCTGCTCCATGGCAGCCCCTGGCAGCGCCATCAGGAGCCAGTGCCCAGG
CAGCAGAGCAGCTGCAGAGAGGCCCAACCAGCCCGTGGAGAGTGACGAGAGC
CTAGGCGGCCTCTCTGCTGCCCTGCGCTCCTGGCACTTGACTCCAAGCTGCCCTCT
GGACCCAGCACCCCTCAGGGAGGCCGGCTGTCTCAGGGGGACACGGCAGGAGA
40 ATCGAGCTGGGGGAGTGGCCAGGATCCCGGCCACAGCCGTGGAAGGACTGGC
CCTTGGCAGCTCTGCATCATCGTCGTCAGAGCCACCGCAGATTATCATCAACCCT
GCCCGACAGAAGATGGTCCAGAAGCTGGCCCTGTACGAGGATGGGGCCCTGGAC
AGCCTGCAGCTGCTGTCTGTCAGCTCCCTCCCAGGCTTGGGCCTGGAACAGGACA
GGCAGGGGGCCCGAAGAAAGTGATGAATTTTCAGAGCTGATGTGTTACCTGGGCA
45 GATCCCCCAAATCCGGAAGTCAAAGTTCTCATGGTCAGAAGTTCTCATGGTGCAC
GAGTCCTCAGCACTCTGCCGGCAGTGGGGGTGGGGGCCCATGCCCGCGGGGGAG
AGAAGGAGGTGGCCCTGCTGTTCTAGGCTCTGTGGGCATAGGCAGGCAGAGTGG
AACCTGCCTCCATGCCAGCATCTGGGGGCAAGGAAGGCTGGCATCATCCAGTG
AGGAGGCTGGCGCATGTTGGGAGGCTGCTGGCTGCACAGACCCGTGAGGGGAGG

AGAGGGGCTGCTGTGCAGGGGTGTGGAGTAGGGAGCTGGCTCCCCTGAGAGCCA
 TGCAGGGCGTCTGCAGCCCAGGCCTCTGGCAGCAGCTCTTTGCCCATCTCTTTGG
 ACAGTGGCCACCCTGCACAATGGGGCCGACGAGGCCTAGGGCCCTCCTACCTGC
 TTACAATTTGGAAAAGTGTGGCCGGGTGCGGTGGCTCACGCCTGTAATCCCAGCA
 5 CTTTGGGAGGCCAAGGCAGGAGGATCGCTGGAGCCCAGTAGGTCAAGACCAGCC
 AGGGCAACATGATGAGACCCTGTCTCTGCCAAAAAATTTTTTAAACTATTAGCCT
 GCGTGGTAGCGCACGCCTGTGGTCCCAGCTGCTGGGGAGGCTGAAGTAGGAGG
 ATCATTATGCTTGGGAGGTCGAGGCTGCAGTGAGTCATGATTGTATGACTGCAC
 TCCAGCCTGGGTGACAGAGCAAGACCCTGTTTCAAAAAGAAAAACCCTGGGAAA
 10 AGTGAAGTATGGCTGTAAGTCTCATGGTTCAGTCCTAGCAAGAAGCGAGAATTCT
 GAGATCCTCCAGAAAGTCGAGCAGCACCCACCTCCAACCTCGGGCCAGTGTCTTC
 AGGCTTTACTGGGGACCTGCGAGCTGGCCTAATGTGGTGGCCTGCAAGCCAGGC
 CATCCCTGGGCGCCACAGACGAGCTCCGAGCCAGGTCAGGCTTCGGAGGCCACA
 AGCTCAGCCTCAGGCCCAGGCACTGATTGTGGCAGAGGGGCCACTACCCAAGGT
 15 CTAGCTAGGCCCAAGACCTAGTTACCCAGACAGTGAGAAGCCCCTGGAAGGCAG
 AAAAGTTGGGAGCATGGCAGACAGGGAAGGGAAACATTTTCAGGGAAAAGACA
 TGTATCACATGTCTTCAGAAGCAAGTCAGGTTTCATGTAACCGAGTGTCTCTTG
 CGTGTCCAAAAGTAGCCAGGGCTGTAGCACAGGCTTCACAGTGATTTTGTGTTT
 AGCCGTGAGTCACACTACATGCCCCCGTGAAGCTGGGCATTGGTGACGTCCAGGT
 20 TGTCTTGAGTAATAAAAACGTATGTTCCCTAAAAAAGGAATTC

SEQ ID NO: 89

>gi|821647|gb|R43734.1|R43734 yg20e10.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:32609 3'

25 TTTTTTTTTGTGTGCAAGTGTTTATTTGGAATCCCTTCTATTTTATTAGAAACAGA
 AACAGTAATTTACACAGTAGGAATTGCGTGTGCTCTCAATACAAGTAAGTTTGCC
 ACTCCTTCAATTGTTGTCCATTGCAGACACTTTGGATTCAAGGTTAAGAATCCAA
 ATGAGAAATAAGAAATATCCGGTCCCTGATGATTCGTTTAAGTCCTGTTCAACTC
 GATGGAAAGCTTCCACCCGAAGGAAGGAGTTACTGTTCCCTCCTGGGCTGGGCTTT
 30 GTGTTTCTTTCAGTGCTCTAAAGGAACTTTGTATTTGGGGCAGCTGTGCTCTGGTC
 ATGTCAGGGCTGGCTGGGACAGGGAGTTTGGATGGCTTACGGGCGGCCGCTGGA
 CCGGGGGCTGGCTTTTTACTTGAAGGCTTCACTGGGGGTGTTCCATTCAATTAC
 AAAGTGGGGCGTTNTGCAGGCCNGTGGAAGGGTTTTGCNNGGGGNTT

35 SEQ ID NO: 90

>gi|34627|emb|X04481.1|HSMH3C2R Human mRNA for complement component C2

GGCTCTCTACCTCTCGCCGCCCTAGGGAGGACACCATGGGCCCCTGATGGTTT
 TTTTTTGCTGCTGTTCTGTACCCAGGTCTGGCAGACTCGGCTCCCTCCTGCCCT
 CAGAACGTGAATATCTCGGGTGGCACCTTCACCCTCAGCCATGGCTGGGCTCCTG
 40 GGAGCCTTCTCACCTACTCCTGCCCCCAGGGCCTGTACCCATCCCCAGCATCACG
 GCTGTGCAAGAGCAGCGGACAGTGGCAGACCCAGGAGCCACCCGGTCTCTGTC
 TAAGGCGGTCTGCAAACCTGTGCGCTGTCCAGCCCCTGTCTCCTTTGAGAATGGC
 ATTTATACCCACGGCTGGGGTCTATCCCGTGGGTGGCAATGTGAGCTTCGAGT
 GTGAGGATGGCTTCATATTGCGGGGCTCGCCTGTGCGTCAGTGTGCCCCAACGG
 45 CATGTGGGATGGAGAAACAGCTGTGTGTGATAATGGGGCTGGCCACTGCCCCAA
 CCCAGGCATTTCACTGGGCGCAGTGGGACAGGCTTCCGCTTTGGTCATGGGGAC
 AAGGTCCGCTATCGCTGCTCCTCGAATCTTGTGCTCACGGGGTCTTCGGAGCGGG
 AGTGCCAGGGCAACGGGGTCTGGAGTGGAACGGAGCCCATCTGCCGCCAACCT
 ACTCTTATGACTTCCCTGAGGACGTGGCCCCCTGCCCTGGGCACTTCTTCTCCAC

ATGCTTGGGGCCACCAATCCCACCCAGAAGACAAAGGAAAGCCTGGGCGGTAAA
 ATCCAAATCCAGCGCTCTGGTCATCTGAACCTCTACCTGCTCCTGGACTGTTTCGC
 AGAGTGTGTTCGGAATGACTTTCTCATCTTCAAGGAGAGCGCCTCCCTCATGGT
 GGACAGGATCTTCAGCTTTGAGATCAATGTGAGCGTTGCCATTATCACCTTTGCC
 5 TCAGAGCCCAAAGTCCTCATGTCTGTCTGAACGACAACCTCCCGGGATATGACTG
 AGGTGATCAGCAGCCTGGAAAATGCCAACTATAAAGATCATGAAAATGGAAGT
 GGACTAACACCTATGCGGCCTTAAACAGTGTCTATCTCATGATGAACAACCAAAT
 GCGACTCCTCGGCATGGAAACGATGGCCTGGCAGGAAATCCGACATGCCATCAT
 CCTTCTGACAGATGGAAAGTCCAATATGGGTGGCTCTCCCAAGACAGCTGTTGAC
 10 CATATCAGAGAGATCCTGAACATCAACCAGAAGAGGAATGACTATCTGGACATC
 TATGCCATCGGGGTGGGCAAGCTGGATGTGGACTGGAGAGAACTGAATGAGCTA
 GGGTCCAAGAAGGATGGTGAGAGGCATGCCTTCATTCTGCAGGACACAAAGGCT
 CTGCACCAGGTCTTTGAACATATGCTGGATGTCTCCAAGCTCACAGACACCATCT
 GCGGGGTGGGGAACATGTCAGCAAACGCCTCTGACCAGGAGAGGACACCCTGGC
 15 ATGTCACTATTAAGCCCAAGAGCCAAGAGACCTGCCGGGGGGGCCCTCATCTCCG
 ACCAATGGGTCTTGACAGCAGCTCATTGCTTCCGCGATGGCAACGACCACTCCCT
 GTGGAGGGTCAATGTGGGAGACCCCAAATCCCAGTGGGGCAAAGAATTGCTTAT
 TGAGAAGGCGGTGATCTCCCCAGGGTTTGATGTCTTTGCCAAAAAGAACCAGGG
 AATCCTGGAGTTCTATGGTGATGACATAGCTCTGCTGAAGCTGGCCCAGAAAGTA
 20 AAGATGTCCACCCATGCCAGGCCATCTGCCTTCCCTGCACGATGGAGGCCAATC
 TGGCTCTGCGGAGACCTCAAGGCAGCACCTGTAGGGACCATGAGAATGAACTGC
 TGAACAAACAGAGTGTTCTGCTCATTGTCGCCTTGAATGGGAGCAAACCTGAA
 CATTAACTTAAGATGGGAGTGGAGTGGACAAGCTGTGCCGAGGTTGTCTCCCA
 AGAAAAAACCATGTTCCCAACTTGACAGATGTCAGGGAGGTGGTGACAGACCA
 25 GTTCCTATGCAGTGGGACCCAGGAGGATGAGAGTCCCTGCAAGGGAGAATCTGG
 GGGAGCAGTTTTCTTGAGCGGAGATTTCAGGTTTTTTTCAGGTGGGTCTGGTGAGC
 TGGGGTCTTTACAACCCCTGCCTTGGCTCTGCTGACAAAACTCCCGCAAAAGGG
 CCCCTCGTAGCAAGGTCCCGCCGCCACGAGACTTTCACATCAATCTCTTCCGCAT
 GCAGCCCTGGCTGAGGCAGCACCTGGGGGATGTCCTGAATTTTTTACCCCTCTAG
 30 CCATGGCCACTGAGCCCTCTGCTGCCCTGCCAGAATCTGCCGCCCCCTCCATCTTCT
 ACCTCTGAATGGCCACCCTTAGACCCTGTGATCCATCCTCTCTCCTAGCTGAGTA
 AATCCGGGTCTCTAGGATGCCAGAGGCAGCGCACACAAGCTGGGAAATCCTCAG
 GGCTCCTACCAGCAGGACTGCCTCGCTGCCCCACCTCCCGCTCCTTGGCCTGTCC
 CCAGATTCCTTCCCTGGTTGACTTGACTCATGCTTGTTTCACTTTCACATGGAATT
 35 TCCAGTTATGAAATTAATAAAAATCAATGGTTTCCAC

SEQ ID NO: 91

>gi|2216792|gb|AA486628.1|AA486628 ab16a05.r1 Stratagene lung (#937210) Homo
 sapiens cDNA clone IMAGE:840944 5' similar to gb:M62829 EARLY GROWTH

40 RESPONSE PROTEIN 1 (HUMAN);
 GCCAAACAGTCACTTTGTTTAAGCAAACACAAGTACAAAGTAAAATAGAACCAC
 AAAATAATGAACTGCATGTTTACATAACATACAAAAATCGCCGCCTACTCAGTAGGT
 AACTACAACATTCCAACCTGAATATATTTATAAATTTACATTTTCAGTTAAAA
 GAATAGACTTTTGAGAGTTCAGATTTTGTGTTTAGATTTTGTGTTTCTTACATTCTGG
 45 AGAACCGAAGCTCAGCTCAGCCCTCTTCTTATTTTGCTCCCAAAGCCTCCCCCA
 AATCATCACTCCCTGCCCCCTTAAGGCTAGAGGTGAGCATGTCCCTCACAATTG
 CACATGTCAAGCCATCAGCAAGGCGCATCACACAAAAGGCACCAAGACGTGAAA
 CTTTTTAAACCAAAGGACGAAGAAAAAACACTTCAAAAAAAAAAAAAA

SEQ ID NO: 92

>gi|898286|gb|H27933.1|H27933 yl58e09.s1 Soares breast 3NbHBst Homo sapiens cDNA clone IMAGE:162472 3' similar to gb:M64572 PROTEIN-TYROSINE PHOSPHATASE PTP-H1 (HUMAN);

5 TNGGNCAATCAAAATGANGGGGTTCTTNGAATAANTNAACATCAGANTGTGTTT
ATNTTCAGATAGNCTGGGCCNCTCCTTNGAAATGCAATGGNGACCNTTGTGACTG
GGGGTGAATGCACACNTTNGTNCCTTCNTACAG

SEQ ID NO: 93

10 >gi|340202|gb|J03258.1|HUMVDR Human vitamin D receptor mRNA, complete cds
GGAACAGCTTGTCCACCCGCCGGCCGACCAGAAGCCTTTGGGTCTGAAGTGTCT
GTGAGACCTCACAGAAGAGCACCCCTGGGCTCCACTTACCTGCCCCCTGCTCCTT
CAGGGATGGAGGCAATGGCGGCCAGCACTTCCCTGCCTGACCCTGGAGACTTTG
ACCGGAACGTGCCCCGGATCTGTGGGGTGTGTGGAGACCGAGCCACTGGCTTTC
15 ACTTCAATGCTATGACCTGTGAAGGCTGCAAAGGCTTCTTCAGGCGAAGCATGAA
GCGGAAGGCACTATTACCTGCCCCCTCAACGGGGACTGCCGCATCACCAGGA
CAACCGACGCCACTGCCAGGCCTGCCGGCTCAAACGCTGTGTGGACATCGGCAT
GATGAAGGAGTTCATTCTGACAGATGAGGAAGTGCAAGGGAAGCGGGAGATGAT
CCTGAAGCGGAAGGAGGAGGAGGCCTTGAAGGACAGTCTGCGGCCCAAGCTGTC
20 TGAGGAGCAGCAGCGCATCATTGCCATACTGCTGGACGCCACCATAAGACCTA
CGACCCACCTACTCCGACTTCTGCCAGTTCGGGCCTCCAGTTCGTGTGAATGAT
GGTGGAGGGAGCCATCCTTCCAGGCCCACTCCAGACACACTCCCAGCTTCTCTG
GGGACTCCTCCTCCTGCTCAGATCACTGTATCACCTCTTCAGACATGATGGA
CTCGTCCAGCTTCTCCAATCTGGATCTGAGTGAAGAAGATTCAGATGACCCTTCT
25 GTGACCCTAGAGCTGTCCCAGCTCTCCATGCTGCCCCACCTGGCTGACCTGGTCA
GTTACAGCATCCAAAAGGTCATTGGCTTTGCTAAGATGATACCAGGATTCAGAGA
CCTCACCTCTGAGGACCAGATCGTACTGCTGAAGTCAAGTGCCATTGAGGTCATC
ATGTTGCGCTCCAATGAGTCCTTACCATGGACGACATGTCTTGACCTGTGGCA
ACCAAGACTACAAGTACCGCGTCAGTGACGTGACCAAAGCCGGACACAGCCTGG
30 AGCTGATTGAGCCCCCTCATCAAGTTCCAGGTGGGACTGAAGAAGCTGAACTTGC
ATGAGGAGGAGCATGTCCTGCTCATGGCCATCTGCATCGTCTCCCCAGATCGTCC
TGGGGTGCAGGACGCCGCGCTGATTGAGGCCATCCAGGACCGCCTGTCCAACAC
ACTGCAGACGTACATCCGCTGCCGCCACCCGCCCCCGGGCAGCCACCTGCTCTAT
GCCAAGATGATCCAGAAGCTAGCCGACCTGCGCAGCCTCAATGAGGAGCACTCC
35 AAGCAGTACCGCTGCCTCTCCTTCCAGCCTGAGTGCAGCATGAAGCTAACGCCCC
TTGTGCTCGAAGTGTTTGGCAATGAGATCTCCTGACTAGGACAGCCTGTGCGGGT
CCTGGGTGGGGCTGCTCCTCCAGGGCCACGTGCCAGGCCCGGGGCTGGCGGCTA
CTCAGCAGCCCTCCTCACCCGTCTGGGGTTCAGCCCCCTCCTCTGCCACCTCCCCTA
TCCACCCAGCCCATTCTCTCTCCTGTCCAACCTAACCCCTTTCCTGCGGGCTTTTC
40 CCCGGTCCCTTGAGACCTCAGCCATGAGGAGTTGCTGTTTGTTTGACAAAGAAAC
CCAAGTGGGGGCAGAGGGCAGAGGCTGGAGGCAGGCCTTGCCCAGAGATGCCTC
CACCGCTGCCTAAGTGGCTGCTGACTGATGTTGAGGGAACAGACAGGAGAAATG
CATCCATTCTCAGGGACAGAGACACCTGCACCTCCCCCACTGCAGGCCCGCT
TGTCAGCGCCTAGTGGGGTCTCCCTCTCCTGCCTTACTCACGATAAATAATCGG
45 CCCACAGCTCCCACCCACCCCTTTCAGTGCCACCAACATCCCATTGCCCTGGT
TATATTCTCACGGGCAGTAGCTGTGGTGAGGTGGGTTTTCTTCCCATCACTGGAG
CACCAGGCACGAACCCACCTGCTGAGAGACCCAAGGAGGAAAAACAGACAAAA
ACAGCCTCACAGAAGAATATGACAGCTGTCCCTGTCACCAAGCTCACAGTTCCTC
GCCCTGGGTCTAAGGGGTGAGGTGGAAGCCCTCCTTCCACGGATCCATGT

AGCAGGACTGAATTGTCCCCAGTTTGCAGAAAAGCACCTGCCGACCTCGTCCTCC
CCCTGCCAGTGCCTTACCTCCTGCCCAGGAGAGCCAGCCCTCCCTGTCCTCCTCG
GATCACCGAGAGTAGCCGAGAGCCTGCTCCCCACCCCCCTCCCCAGGGGAGAGG
GTCTGGAGAAGCAGTGAGCCGCATCTTCTCCATCTGGCAGGGTGGGATGGAGGA
5 GAAGAATTTTCAGACCCCAGCGGCTGAGTCATGATCTCCCTGCCGCCTCAATGTG
GTTGCAAGGCCGCTGTTACACACAGGGCTAAGAGCTAGGCTGCCGCACCCCA
GTGTGGGAAGGGAGAGCGGGGCAGTCTCGGGTGGCTAGTCAGAGAGAGTGTGTTG
GGGGTTCCGTGATGTAGGGTAAGGTGCCTTCTTATTCTCACTCCACCACCCAAAA
GTCAAAAGGTGCCTGTGAGGCAGGGGCGGAGTGATACTTCAAGTGCATGCT
10 CTCTGCAGGTCGAGCCCAGCCCAGCTGGTGGGAAGCGTCTGTCCGTTTACTCCAA
GGTGGGTCTTTGTGAGAGTGAGCTGTAGGTGTGCGGGACCGGTACAGAAAGGCG
TTCTTCGAGGTGGATCACAGAGGCTTCTTCAGATCAATGCTTGAGTTTGGAATCG
GCCGCATTCCCTGAGTCACCAGGAATGTTAAAGTCAGTGGGAACGTGACTGCCCC
AACTCCTGGAAGCTGTGTCCTTGCACCTGCATCCGTAGTTCCTGAAAACCCAGA
15 GAGGAATCAGACTTCACACTGCAAGAGCCTTGGTGTCCACCTGGCCCCATGTCTC
TCAGAATTCCTCAGGTGGAAAAACATCTGAAAGCCACGTTCCCTTACTGCAGAATA
GCATATATATCGCTTAATCTTAAATTTATTAGATATGAGTTGTTTTTCAGACTCAGA
CTCCATTTGTATTATAGTCTAATATACAGGGTAGCAGGTACCACTGATTTGGAGA
TATTTATGGGGGGGAGAACTTACATTGTGAACTTCTGTACATTAATTATTATTGCT
20 GTTGTTATTTTACAAGGGTCTAGGGAGAGACCCTTGTTTGATTTTAGCTGCAGAA
CTGTATTGGTCCAGCTTGCTCTTCAGTGGGAGAAAAACACTTGTAAGTTGCTAAA
CGAGTCAATCCCCTCATTACAGGAAAACTGACAGAGGAGGGCGTGACTCACCCAA
GCCATATATAACTAGCTAGAAGTGGGCCAGGACAGGCCGGGCGCGGTGGCTCAC
GCCTGTAATCCCAGCAGTTTGGGAGGTCGAGGTAGGTGGATCACCTGAGGTTCGG
25 GAGTTCGAGACCAACCTGACCAACATGGAGAAACCCTGTCTCTATTAATAAATAC
AAAAAAAAAAAAAAAAAAAAAAAAATAGCCGGGCATGGTGGCGCAAGCCTGTAATCC
CAGCTACTCAGGAGGCTGAGGCAGAAGAATTGAACCCAGGAGGTGGAGGTTGCA
GTGAGCTGAGATCGTGCCGTTACTCTCCAACCTGGACAACAAGAGCGAAACTCC
GTCTTAGAAGTGGACCAGGACAGGACCAGATTTTGGAGTCATGGTCCGGTGTCTT
30 TTTCACTACACCATGTTTGAGCTCAGACCCCCACTCTCATTCCCCAGGTGGCTGAC
CCAGTCCCTGGGGGAAGCCCTGGATTTTCAGAAAGAGCCAAGTCTGGATCTGGGA
CCCTTTCCCTTCCCTGGCTTGTAACCTCCACCAAGCCCATCAGAAGGAGAAGG
AAGGAGACTCACCTCTGCCTCAATGTGAATCAGACCCTACCCACACGATGTGC
CCTGGCTGCTGGGCTCTCCACCTCAGGCCTTGGATAATGCTGTTGCCTCATCTATA
35 ACATGCATTTGTCTTTGTAATGTCACCACCTTCCCAGCTCTCCCTCTGGCCCTGCT
TCTTCGGGGAACTCCTGAAATATCAGTTACTCAGCCCTGGGCCCCACCACCTAGG
CCACTCCTCCAAAGGAAGTCTAGGAGCTGGGAGGAAAAGAAAAGAGGGGAAAA
TGAGTTTTTATGGGGCTGAACGGGGAGAAAAGGTCATCATCGATTCTACTTTAGA
ATGAGAGTGTGAAATAGACATTTGTAAATGTAAACTTTTAAGGTATATCATTAT
40 AACTGAAGGAGAAGGTGCCCAAAATGCAAGATTTTCCACAAGATTCCCAGAGA
CAGGAAAATCCTCTGGCTGGCTAACTGGAAGCATGTAGGAGAATCCAAGCGAGG
TCAACAGAGAAGGCAGGAATGTGTGGCAGATTTAGTGAAAGCTAGAGATATGGC
AGCGAAAGGATGTAAACAGTGCCTGCTGAATGATTTCCAAAGAGAAAAAAGTT
TGCCAGAAGTTTGTCAAGTCAACCAATGTAGAAAGCTTTGCTTATGGTAATAAAA
45 ATGGCTCATACTTATATAGCACTTACTTTGTTTGCAAGTACTGCTGTAAATAAATG
CTTTATGCAAACC

SEQ ID NO: 94

>gi|1716184|gb|AA146802.1|AA146802 zo41b09.r1 Stratagene endothelial cell 937223

Homo sapiens cDNA clone IMAGE:589433 5' similar to SW:YHGK_ECOLI P46849

HYPOTHETICAL 15.4 KD PROTEIN IN MALT-GLPR INTERGENIC REGION ;

5 GANGCTCAAACATTTATCTGGACTGGAAATGATTCGAGATTTGTGTGATGGGCAA
CTGGAGGGGGCAGAAATTGGCTCAACAGAAATAACCTTTACACCAGAGAAGATC
AAAGGTGGAATCCACACAGCAGATACCAAGACAGCAGGGAGTGTGTGCCTCTTG
ATGCAGGTCTCAATGCCGTGTGTTCTCTTTGCTGCTTCTCCATCAGAACTTCATTT
10 GAAAGGTGGAATAATGCTGAAATGGCACCACAGATCGATTATACAGTGATGGT
CTTCAAGCCAATTGTTGAAAAATTTGGTTTCATATTTAATTGTGACATTAAACA
AGGGGATATTACCCAAAAGGGGGTGGTGAAGTGATTGTTTGAATGTCACCAGTT
AAACAATTGAACCTATANATTTAACTGAGCGTGGCTGTGTGACTAAGATATATG
GAAGAGCTTTCGTTGCTG

15 SEQ ID NO: 95

>gi|31113|emb|X00588.1|HSEGFPRE Human mRNA for precursor of epidermal growth factor receptor

GCCGCGCTGCGCCGGAGTCCCGAGCTAGCCCCGGCGCCGCGCCGCCAGACCG
GACGACAGGCCACCTCGTCGGCGTCCGCCCAGTCCCCGCCTCGCCGCCAACGCC
20 ACAACCACCGCGCACGGCCCCCTGACTCCGTCCAGTATTGATCGGGAGAGCCGG
AGCGAGCTCTTCGGGGAGCAGCGATGCGACCCTCCGGGACGGCCGGGGCAGCGC
TCCTGGCGCTGCTGGCTGCGCTCTGCCCCGGCGAGTCGGGCTCTGGAGGAAAAGA
AAGTTTGCCAAGGCACGAGTAACAAGCTCACGCAGTTGGGCACTTTTGAAGATC
ATTTTCTCAGCCTCCAGAGGATGTTCAATAACTGTGAGGTGGTCTTGGGAATTT
25 GGAAATTACCTATGTGCAGAGGAATTATGATCTTTCCTTCTTAAAGACCATCCAG
GAGGTGGCTGGTTATGTCCTCATTGCCCTCAACACAGTGGAGCGAATTCCTTTGG
AAAACCTGCAGATCATCAGAGGAAATATGTACTACGAAAATTCCTATGCCTTAGC
AGTCTTATCTAACTATGATGCAAATAAAACCGGACTGAAGGAGCTGCCCATGAG
AAATTTACAGGAAATCCTGCATGGCGCCGTGCGGTTTCAGCAACAACCTGCCCTG
30 TGCAACGTGGAGAGCATCCAGTGGCGGGACATAGTCAGCAGTGACTTTCTCAGC
AACATGTTCGATGGACTTCCAGAACCACCTGGGCAGCTGCCAAAAGTGTGATCCA
AGCTGTCCCAATGGGAGCTGCTGGGGTGCAGGAGAGGAGAACTGCCAGAAACTG
ACCAAAATCATCTGTGCCAGCAGTGCTCCGGGCGCTGCCGTGGCAAGTCCCCCA
GTGACTGCTGCCACAACCAGTGTGCTGCAGGCTGCACAGGCCCCCGGGAGAGCG
35 ACTGCCTGGTCTGCCGCAAATTCCGAGACGAAGCCACGTGCAAGGACACCTGCC
CCCCACTCATGCTCTACAACCCACACGTACCAGATGGATGTGAACCCCGAGGG
CAAATACAGCTTTGGTGCCACCTGCGTGAAGAAGTGTCCCCGTAATTATGTGGTG
ACAGATCACGGCTCGTGCGTCCGAGCCTGTGGGGCCGACAGCTATGAGATGGAG
GAAGACGGCGTCCGCAAGTGTAAGAAGTGCGAAGGGCCTTGCCGCAAAGTGTGT
40 AACGGAATAGGTATTGGTGAATTTAAAGACTCACTCTCCATAAATGCTACGAATA
TTAAACACTTCAAAAACCTGCACCTCCATCAGTGGCGATCTCCACATCCTGCCGGT
GGCATTTAGGGGTGACTCCTTCACACATACTCCTCCTCTGGATCCACAGGAACTG
GATATTCTGAAAACCGTAAAGGAAATCACAGGGTTTTTGCTGATTCAGGCTTGGC
CTGAAAACAGGACGGACCTCCATGCCTTTGAGAACCTAGAAATCATACGCGGCA
45 GGACCAAGCAACATGGTCAGTTTTCTCTTGCAAGTCGTCAGCCTGAACATAACATC
CTTGGGATTACGCTCCCTCAAGGAGATAAGTGATGGAGATGTGATAATTTTCAGGA
AACAAAAATTTGTGCTATGCAAATAACAATAAACTGGAAAAAACTGTTTGGGACC
TCCGGTCAGAAAACCAAAATTATAAGCAACAGAGGTGAAAACAGCTGCAAGGCC
ACAGGCCAGGTCTGCCATGCCTTGTGCTCCCCCGAGGGCTGCTGGGGCCCCGGAGC

CCAGGGACTGCGTCTCTTGCCGGAATGTCAGCCGAGGCAGGGAATGCGTGGACA
AGTGCAAGCTTCTGGAGGGTGAGCCAAGGGAGTTTGTGGAGAACTCTGAGTGCA
TACAGTGCCACCCAGAGTGCCTGCCTCAGGCCATGAACATCACCTGCACAGGAC
GGGGACCAGACAACTGTATCCAGTGTGCCACTACATTGACGGCCCCCACTGCGT
5 CAAGACCTGCCCAGGAGTCATGGGAGAAAACAACACCCTGGTCTGGAAGTA
CGCAGACGCCGGCCATGTGTGCCACCTGTGCCATCCAACTGCACCTACGGATGC
ACTGGGCCAGGTCTTGAAGGCTGTCCAACGAATGGGCCTAAGATCCCGTCCATCG
CCACTGGGATGGTGGGGGCCCTCCTCTTGCTGCTGGTGGTGGCCCTGGGGATCGG
CCTCTTCATGCGAAGGCGCCACATCGTTCGGAAGCGCACGCTGCGGAGGCTGCTG
10 CAGGAGAGGGAGCTTGTGGAGCCTCTTACACCCAGTGGAGAAGCTCCCAACCAA
GCTCTCTTGAGGATCTTGAAGGAACTGAATTCAAAAAGATCAAAGTGCTGGGC
TCCGGTGCCTTCGGCACGGTGTATAAGGGACTCTGGATCCCAGAAGGTGAGAAA
GTTAAAATTCCCGTCGCTATCAAGGAATTAAGAGAAGCAACATCTCCGAAAGCC
AACAAGGAAATCCTCGATGAAGCCTACGTGATGGCCAGCGTGGACAACCCCCAC
15 GTGTGCCGCCTGCTGGGCATCTGCCTCACCTCCACCGTGCAACTCATCACGCAGC
TCATGCCCTTCGGCTGCCTCCTGGACTATGTCCGGGAACACAAAGACAATATTGG
CTCCAGTACCTGCTCAACTGGTGTGTGCAGATCGCAAAGGGCATGAACTACTTG
GAGGACCGTCGCTTGGTGCACCGCGACCTGGCAGCCAGGAACGTACTGGTGAAA
ACACCGCAGCATGTCAAGATCACAGATTTTGGGCTGGCCAACTGCTGGGTGCG
20 GAAGAGAAAGAATACCATGCAGAAGGAGGCAAAGTGCCTATCAAGTGGATGGC
ATTGGAATCAATTTTACACAGAATCTATACCCACCAGAGTGATGTCTGGAGCTAC
GGGGTGACCGTTTGGGAGTTGATGACCTTTGGATCCAAGCCATATGACGGAATCC
CTGCCAGCGAGATCTCCTCCATCCTGGAGAAAGGAGAACGCCTCCCTCAGCCACC
CATATGTACCATCGATGTCTACATGATCATGGTCAAGTGCTGGATGATAGACGCA
25 GATAGTCGCCAAAGTTCCGTGAGTTGATCATCGAATTCTCCAAAATGGCCCGAG
ACCCCCAGCGCTACCTTGTCAATTCAGGGGGATGAAAGAATGCATTTGCCAAGTCC
TACAGACTCCAACCTTCTACCGTGCCCTGATGGATGAAGAAGACATGGACGACGT
GGTGGATGCCGACGAGTACCTCATCCACAGCAGGGCTTCTTCAGCAGCCCCTCC
ACGTCACGGAATCCCTCCTGAGCTCTCTGAGTGCAACCAGCAACAATTCCACCG
30 TGGCTTGCATTGATAGAAATGGGCTGCAAAGCTGTCCCATCAAGGAAGACAGCT
TCTTGCAGCGATACAGCTCAGACCCACAGGCGCCTTGACTGAGGACAGCATAG
ACGACACCTTCCTCCCAGTGCCTGAATACATAAACCAGTCCGTTCCCAAAAGGCC
CGCTGGCTCTGTGCAGAATCCTGTCTATCACAATCAGCCTCTGAACCCCGCGCCC
AGCAGAGACCCACACTACCAGGACCCCCACAGCACTGCAGTGGGCAACCCCGAG
35 TATCTCAACACTGTCCAGCCCACCTGTGTCAACAGCACATTCGACAGCCCTGCCC
ACTGGGCCCAGAAAGGCAGCCACCAAATTAGCCTGGACAACCCTGACTACCAGC
AGGACTTCTTTCCCAAGGAAGCCAAGCCAAATGGCATCTTTAAGGGCTCCACAGC
TGAAAATGCAGAATACCTAAGGGTCGCGCCACAAAGCAGTGAATTTATTGGAGC
ATGACCACGGAGGATAGTATGAGCCCTAAAAATCCAGACTCTTTCGATACCCAG
40 GACCAAGCCACAGCAGGTCTCCATCCCAACAGCCATGCCCCGATTAGCTCTTAG
ACCCACAGACTGGTTTTGCAACGTTTACACCGACTAGCCAGGAAGTACTTCCACC
TCGGGCACATTTTGGGAAGTTGCATTCCTTTGTCTTCAAACCTGTGAAGCATTTACA
GAAACGCATCCAGCAAGAATATTGTCCCTTTGAGCAGAAATTTATCTTTCAAAGA
GGTATATTTGAAAAAAGTATATGTGAGGATTTTATTGATTGGGG
45 ATCTTGGAGTTTTTCAATTGTCGCTATTGATTTTTACTTCAATGGGCTCTTCCAACA
AGGAAGAAGCTTGTGGTAGCACTTGCTACCCTGAGTTCATCCAGGCCCACTGT
GAGCAAGGAGCACAAGCCACAAGTCTTCCAGAGGATGCTTGATTCCAGTGGTTC
TGCTTCAAGGCTTCCACTGCAAAACACTAAAGATCCAAGAAGGCCTTCATGGCCC
CAGCAGGCCGGATCGGTACTGTATCAAGTCATGGCAGGTACAGTAGGATAAGCC

ACTCTGTCCCTTCCTGGGCAAAGAAGAAACGGAGGGGATGAATTCTTCCTTAGAC
 TTAATTTTGTAAAAATGTCCCCACGGTACTTACTCCCCACTGATGGACCAGTGGTT
 TCCAGTCATGAGCGTTAGACTGACTTGTGTTGTCTTCCATTCCATTGTTTTGAACT
 CAGTATGCCGCCCTGTCTTGCTGTCATGAAATCAGCAAGAGAGGATGACACATC
 5 AAATAATAACTCGGATTCCAGCCCACATTGGATTTCATCAGCATTGAGGACCAATAG
 CCCACAGCTGAGAATGTGGAATACCTAAGGATAACACCGCTTTTGTTCGCAAA
 AACGTATCTCCTAATTTGAGGCTCAGATGAAATGCATCAGGTCCTTTGGGGCATA
 GATCAGAAGACTACAAAAATGAAGCTGCTCTGAAATCTCCTTTAGCCATCACCCC
 AACCCCCCAAATTAGTTTGTGTTACTTATGGAAGATAGTTTTCTCCTTTTACTTC
 10 ACTTCAAAAGCTTTTTACTCAAAGAGTATATGTTCCCTCCAGGTCAGCTGCCCCC
 AAACCCCTCCTTACGCTTTGTACACAAAAAGTGTCTCTGCCTTGAGTCATCTAT
 TCAAGCACTTACAGCTCTGGCCACAACAGGGCATTTTACAGGTGCGAATGACAGT
 AGCATTATGAGTAGTGTGAATTCAGGTAGTAAATATGAACTAGGGTTTGAAATT
 GATAATGCTTTCACAACATTTGCAGATGTTTTAGAAGGAAAAAGTTCCTTCCTA
 15 AAATAATTTCTCTACAATTGGAAGATTGGAAGATTCAGCTAGTTAGGAGCCCAT
 TTTTCTAATCTGTGTGTGCCCTGTAACCTGACTGGTTAACAGCAGTCCTTTGTAA
 ACAGTGTTTTAACTCTCCTAGTCAATATCCACCCCATCCAATTTATCAAGGAAG
 AAATGGTTCAGAAAATATTTTCAGCCTACAGTTATGTTTCAGTCACACACACATAC
 AAAATGTTCTTTTGTCTTTTAAAGTAATTTTTGACTCCCAGATCAGTCAGAGCCCC
 20 TACAGCATTGTTAAGAAAGTATTTGATTTTTGTCTCAATGAAAATAAACTATAT
 TCATTTCC

SEQ ID NO: 96

>gi|1770395|emb|X83864.1|HSEDG3 H.sapiens EDG-3 gene

25 AATGCCAAGTGATGGCAACTGCCTCCCGCCGCGTCTCCAGCCGGTGCGGGGAAC
 GAGACCCTGCGGAGATTACCAGTACGTGGGGAAGTTGGCGGGCAGGAATTCAGA
 ATCCATTGAGGCCTTCACTCACCCTTTCCCTCTCTCGCTGTGTTCCCAAATGTGC
 CACTTTTCTGTTGGCTCACATGCACCCATGCTCTATTTGATATTCAGGGCTCTGAA
 TTTCAAGCCAGACTCAGTCAGTGTGATTGTCACTGCTTTCTGTCTTCCTTTATC
 30 ATCTGTAGACTTGGGTCCCGTTTTTGCAGGTTGATGTTCTGTCTTCGCTGGGCTCT
 GGAATCACTGCTCACGAGTGCGGTGTCTGCATGGGCACTGCCAGACATGCACTG
 TTGGTCCCTCGATGGCTGCATGGTCAGGCCTCAGGGCTCTCTGCCAGGCCGACCT
 ACAGCCCATAACAGACCTGATTTCTGGGCCTGGATCCAGGGGATGCCATCTGGGA
 AGTGCGGGATCTTCCACAGATGTCACTGTAAACTCACCAGGGAGGTTTTAGAAA
 35 TTGAACCGGCATCATTACAGATTCCATCCTGCTTTTTGGTCTGAGAAAATCCTGCT
 TTTCCCTGAGTAACTGGGATAATGGGTACACAGCTCCCATGCCCTAGATGAGGAC
 TAGTTAGCATTTTCTAGTGCCTGGAGATTTCCAGATGGAAGCTGTACTTGGGTCT
 GTGTATCTTTGTTACAGGATTCAATAATTCATGCACTGAATTTCCCTTCCCGGCAA
 CTCCAGACACCAAATCGCTTCCCATGGTGTCCCCCAATCACTTAGGAATTTAGCC
 40 TGTGTCTAAAGACCCTCTCTGCAGCCTGACGTGGCTAGCCATCCAGTACTTCCA
 CGTTTTTTCATGCCTTTCTCCAACAGCGTTGCCGTGGCCCCCTTAGGCGGCGATCGTT
 TTATCAATGGTCGCTCCCTCTTTTTATCTGTTGGCAGGAGCCCTTTTTCAACGCCC
 TCGCTGGAGTCTGGCCTGCACGCCTTGTGAATGAAGCCGGAACCTCAGCCCCGC
 TTCCCTTTGAAATGAATGTTCTGGGGCGCCCTCTCGTGGATTTTGGAGCTAATCG
 45 TCTGTGAATGCCAAGTGATGGCAACTGCCCTCCCGCCGCGTCTCCAGCCGGTGCG
 GGGGAACGAGACCCTGCGGGAGCATTACCAGTACGTGGGGAAGTTGGCGGGCAG
 GCTGAAGGAGGCCTCCGAGGGCAGCACGCTCACCACCGTGCTCTTCTTGGTCATC
 TGCAGCTTCATCGTCTTGGAGAACCTGATGGTTTTGATTGCCATCTGGAAAAACA
 ATAAATTTACAACCGCATGTACTTTTTATTGGCAACCTGGCTCTCTGCGACCTG

CTGGCCGGCATCGCTTACAAGGTCAACATTCTGATGTCTGGCAAGAAGACGTTCA
 GCCTGTCTCCACGGTCTGGTTCCTCAGGGAGGGCAGTATGTTTCGTGGCCCTTGG
 GGCCTCCACCTGCAGCTTACTGGCCATCGCCATCGAGCGGCACTTGACAATGATC
 AAAATGAGGCCTTACGACGCCAACAAGAGGCACCGCGTCTTCCTCCTGATCGGG
 5 ATGTGCTGGCTCATTGCCTTCACGCTGGGCGCCCTGCCCATCTGGGCTGGAAC
 GCCTGCACAATCTCCCTGACTGCTCTACCATCCTGCCCCCTCTACTCCAAGAAGTA
 CATTGCCTTCTGCATCAGCATCTTCACGGCCATCCTGGTGACCATCGTGATCCTCT
 ACGCACGCATCTACTTCCTGGTGAAGTCCAGCAGCCGTAAGGTGGCCAACCACA
 ACAACTCGGAGCGGTCCATGGCACTGCTGCGGACCGTGGTGATTGTGGTGAGCG
 10 TGTTTCATCGCCTGCTGGTCCCCACTCTTCATCCTCTTCCTCATTGATGTGGCCTGC
 AGGGTGACAGGCGTGCCCCATCCTCTTCAAGGCTCAGTGGTTCATCGTGTGGCTG
 TGCTCAACTCCGCCATGAACCCGGTCATCTACACGCTGGCCAGCAAGGAGATGC
 GGCGGGCCTTCTTCCGTCTGGTCTGCAACTGCCTGGTCAGGGGACGGGGGGCCCCG
 CGCCTCACCCATCCAGCCTGCGCTCGACCCAAGCAGAAGTAAATCAAGCAGCAG
 15 CAACAATAGCAGCCACTCTCCGAAGGTCAAGGAAGACCTGCCCCACACAGACCC
 CTCATCCTGCATCATGGACAAGAACGCAGCACTTCAGAATGGGATCTTCTGCAAC
 TGATCGTCTCCATGCGCCCTGCTCTGCGGCTGTGTTCTTATTTATTGCATGCGTCG
 CTTCCACAGGGGCC

20 SEQ ID NO: 97

>gi|30129|emb|X61598.1|HSCOLLIG H.sapiens mRNA for colligin (a collagen-binding protein)

GGTCCTCTGTGGTGCACAGCCCACCCCCCAGCCATGCGCTCTCTCCTTCTGGGCA
 CCTTATGCCTCCTGGCTGTGGCCCTGGCAGCCGAGGTGAAGAAACCTGTAGAGGC
 25 CGCAGCCCCCTGGTACTGCGGAGAAGCTGAGTTCCAAGGCGACCACACTGGCAGA
 GCCCAGCACAGGCCTGGCCTTCAGCCTGTATCAGGCAATGGCCAAGGACCAGGC
 AGTGGAGAACATCCTGGTGTACCCCGTGGTGGTGGCCTCGTCGCTGGGTCTCGTG
 TCGCTGGGCGGCAAGGCGACCACGGCGTCGCAGGCCAAGGCAGTGCTGAGCGCC
 GAGCAGCTGCGCGACGAGGAGGTGCACGCCGGCCTGGGTGAGCTGCTGCGCTCA
 30 CTCAGCAACTCGACGGCGCGCAACGTGACCTGGAAGCTGGGCAGCCGACTGTAC
 GGACCCAGCTCAGTGAGCTTCGCTGATGACTTCGTGCGCAGCAGCAAGCAGCAC
 TACAACTGCGAGCACTCCAAGATCAACTTCCCGGACAAGCGCAGCGCGCTGCAG
 TCCATCAACGAGTGGGCCGCGCAGACCACCGACGGCAAGCTGCCCCGAGGTCACC
 AAGGACGTGGAGCGCACGGACGGCGCCCTGCTAGTCAACGCCATGTTCTTCAAG
 35 CCACACTGGGATGAGAAATTCCACCACAAGATGGTGGACAACCGTGGCTTCATG
 GTGACTCGGTCTATACTGTGGGTGTTACGATGATGCACCGGACAGGCCTCTACA
 ACTACTACGACGACGAGAAGGAGAAGCTGCAGCTGGTGGAGATGCCCCCTGGCTC
 ACAAGCTCTCCAGCCTCATCATCCTCATGCCCCATCACGTGGAGCCTCTCGAGCG
 CCTTGAAAAGCTGCTAACCAGAGCAGCTGAAGATCTGGATGGGGAAGATGCA
 40 GAAGAAGGCTGTTGCCATCTCCTTGCCCCAAGGGTGTGGTGGAGGTGACCCATGA
 CCTGCAGAAACACCTGGCTGGGCTGGGCCTGACTGAGGCCATTGACAAGAACAA
 GGCCGACTTATCACGCATGTCTGGCAAGAAGGATCTGTACCTGGCCAGTGTGTTT
 CACGCCACCGCCTTTGAGTTGGACACAGATGGCAACCCCTTTGACCAGGACATCT
 ACGGGCGCGAGGAGCTGCGCAGCCCCAAGCTGTTCTACGCCGACCACCCCTTCAT
 45 CTTCTCCTGGTGCAGGACACCCAAAGCGGCTCCCTGCTATTTCATTGGGCGCCTGGTC
 CGGCTCAAGGGTGACAAGATGCGAGACGAGTTATAGGGCCTCAGGGTGACACACA
 GGATGGCAGGAGGCATCCAAAGGCTCCTGAGACACATGGGTGCTATTGGGGTTG
 GGGGGGAGGTGAGGTACCAGCCTTGGATACTCCATGGAATTCGAGCTCCACTTG
 GACATGGGCCCCAGATACCATGATGCTGAGCCCGGAACTCCACATCCTGTGGG

ACCTGGGCCATAGTCATTCTGCCTGCCCTGAAAGTCCCAGATCAAGCCTGCCTCA
 ATCAGTATTCATATTTATAGCCAGGTACCTTCTCACCTGTGAGACCAAATTGAGC
 TCGGGGGGTCAGCCAGCCCTCTTCTGACACTAAAACACCTCAGCTGCCTCCCCAG
 CTCTATCCCAACCTCTCCCAACTATAAACTAGGTGCTGCAGCCTGGGACCAGGC
 5 ACCCCCAGAATGACCTGGCCGCAGTGAGGCGATTGAGAAGGAGCTCCCAGGAGG
 GGCTTCTGGGAAGACCCTGGTCAAGAAGCATCGTCTGGCGTTGTGGGGATGAAC
 TTTTGTGTTTGTGTTCTTCCTTTTTTAGTTCTTCAAGGAATGGGGGGCCAGGGGGGC
 AATGAGCCTTTGTTGCTAATCAAATCCGGGACTTGTTGTACGTTTTTTTTTCTCA
 CTGAAACCTTTTCCAGTGCCAAAAA

10

SEQ ID NO: 98

>gi|1673574|gb|U76549.1|HSU76549 Human cytokeratin 8 mRNA, complete cds

CACTCCTGCCTCCACCATGTCCATCAGGGTGACCCAGAAGTCCTACAAGGTGTCC
 ACCTCTGGCCCCCGGGCCTTCAGCAGCCGCTCCTACACGAGTGGGCCCCGGTTCCC
 15 GCATCAGCTCCTCGAGCTTCTCCCGAGTGGGCAGCAGCAACTTTCGCGGTGGCCT
 GGGCGGCGGCTATGGTGGGGCCAGCGGCATGGGAGGCATCACCGCAGTTACGGT
 CAACCAGAGCCTGCTGAGCCCCCTTGTCTGGAGGTGGACCCCAACATCCAGGCC
 GTGCGCACCCAGGAGAAGGAGCAGATCAAGACCCTCAACAACAAGTTTGCCTCC
 TTCATAGACAAGGTACGGTTCCTGGAGCAGCAGAACAAAGATGCTGGAGACCAAG
 20 TGGAGCCTCCTGCAGCAGCAGAAGACGGCTCGAAGCAACATGGACAACATGTTC
 GAGAGCTACATCAACAACCTTAGGCGGCAGCTGGAGACTCTGGGCCAGGAGAAG
 CTGAAGCTGGAGGCGGAGCTTGGAACATGCAGGGGCTGGTGGAGGACTTCAAG
 AACAAGTATGAGGATGAGATCAATAAGCGTACAGAGATGGAGAACGAATTTGTC
 CTCATCAAGAAGGATGTGGATGAAGCTTACATGAACAAGGTAGAGCTGGAGTCT
 25 CGCCTGGAAGGGCTGACCGACGAGATCAACTTCCTCAGGCAGCTGTATGAAGAG
 GAGATCCGGGAGCTGCAGTCCCAGATCTCGGACACATCTGTGGTGTGTCCATGG
 ACAACAGCCGCTCCCTGGACATGGACAGCATCATTGCTGAGGTCAAGGCACAGT
 ACGAGGATATTGCCAACCGCAGCCGGGCTGAGGCTGAGAGCATGTACCAGATCA
 AGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCACGGGGATGACCTGCGGGCGCA
 30 CAAAGACTGAGATCTCTGAGATGAACCGGAACATCAGCCGGCTCCAGGCTGAGA
 TTGAGGGCCTCAAAGGCCAGAGGGCTTCCCTGGAGGCCGCCATTGCAGATGCCG
 AGCAGCGTGGAGAGCTGGCCATTAAGGATGCCAACGCCAAGTTGTCCGAGCTGG
 AGGCCGCCCTGCAGCGGGCCAAGCAGGACATGGCGCGGCAGCTGCGTGAGTACC
 AGGAGCTGATGAACGTCAAGCTGGCCCTGGACATCGAGATCGCCACCTACAGGA
 35 AGCTGCTGGAGGGCGAGGAGAGCCGGCTGGAGTCTGGGATGCAGAACATGAGTA
 TTCATACGAAGACCACCAGCGGCTATGCAGGTGGTCTGAGCTCGGCCTATGGGG
 GCCTCACAAGCCCCGGCCTCAGCTACAGCCTGGGCTCCAGCTTTGGCTCTGGCGC
 GGGCTCCAGCTCCTTCAGCCGCACCAGCTCCTCCAGGGCCGTGGTTGTGAAGAAG
 ATCGAGACACGTGATGGGAAGCTGGTGTCTGAGTCCTCTGACGTCCTGCCCAAGT
 40 GAACAGCTGCGGCAGCCCCTCCCAGCCTACCCCTCCTGCGCTGCCCCAGAGCCTG
 GGAAGGAGGCCGCTAT

SEQ ID NO: 99

>gi|2068972|gb|AA411440.1|AA411440 zv30d05.s1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:755145 3' similar to gb:J05021 EZRIN (HUMAN);

TTTTTTTTTTTTTTTTTTTTTTTTTGCCTTTGCAAAGCTTTTATTTTCATGTCTGCGGCAT
 GGAATCCACCTGCACATGGCATCTTAGCTGTGAAGGAGAAAGCAGTGCACGAGA
 AGGAATGAGTGGGCGGAACCAACGGCCTCCACAAGCTGCCTTCCAGCAGCCTGC
 CAAGCGCATGGCAGAGAGAGACTGCAAACAAACACAAGCAAACAGAGTCTCTTC

ACAGCTGGAGTCTGAAAGCTCATAGTGGCATGTGTGAATCTGACAAAATTA
 GTGTGCATAGTCCATTACATGCATAAAACACTAATAATAATCCTGTTTACACGTG
 ACTGCAGCAGGCAGGTCCAGCTCCACCACTGGCCTCCTGCCACATCACATCAAGT
 GCCATGGTTTATAGAGGGTTTTTCATATGTAATTCTTTTATTCTGTAAAAGGTAACAA
 5 AATATACAGAACAAAACCTTTCCCTTTTTTAAACTAATGTTACAAATCTGTATTAT
 CACTTGTATATAAATAGTATATAGCTGATCATTATAAGGTGTATAAGTACAATG
 TATTCTAAAACCTGTTAAGC

SEQ ID NO: 100

10 >gi|2219420|gb|AA490238.1|AA490238 aa44a03.s1 Soares_NhHMPu_S1 Homo sapiens
 cDNA clone IMAGE:823756 3' similar to TR:G505033 G505033 MITOGEN INDUCIBLE
 GENE MIG-2 ;
 GGGCCACAGGAGCGCTTCGCAGCCGAGGAACCGGACGCGGACACCGCGCCCCGG
 AGCCTCCAGCCCCCTCGCCTGTTGCCGCGCGAGTCCCGGGCCCCGGAGCGCTAGGA
 15 GCGTCGGAAGGAGCCATGCTCTGGACGGGATAAGGATGCCAGATGGCTGCTACG
 CGGACGGGACGTGGGAACCTGAGTGTCCATGTGACGGACCTGAACCGCGATGTCA
 CCCTGAGAGTGACCGGCGAGGTGCACATTGGAGGCGTGATGCTTAAGCTGGTGG
 AGAAACTCGATGTAAAAAAAGATTGGTCTGACCATGCTCTCTGGTGGGAAAAGA
 AGAGAACTTGGCTTCTGAAGACACATTGGACCTTAGATAAGTATGGTATTCAGGC
 20 AGATGCTAAGCTTCAGTTCACCCCTCAGCACAACTGCTCCGCCTGCAGCTTCCC
 AACATGAAGTATGTGAAGGTG

SEQ ID NO: 101

25 >gi|292069|gb|L04510.1|HUMGUABIND Human nucleotide binding protein mRNA,
 complete cds
 CTGTGGCGCTTCCCCTGCGAGGATGGCTACCCTGGTTGTAAACAAGCTCGGAGCG
 GGAGTAGACAGTGGCCGGCAGGGCAGCCGGGGGACAGCTGTAGTGAAGGTGCT
 AGAGTGTGGAGTTTGTGAAGATGTCTTTTCTTTGCAAGGAGACAAAGTTCCCCGT
 CTTTGTCTTTGTGGCCATACCGTCTGTCTGACTGTCTCACTCGCCTACCTCTTCA
 30 TGAAGAGCAATCCGTTGCCCATTTGATCGACAAGTAACAGACCTAGGTGATTCA
 GGTGTCTGGGGATTGAAAAAAATTTTGTCTTATTGGAGCTTTTGAACGACTGC
 AGAATGGGCCTATTGGTCAAGTATGGAGCTGCAGAAGAATCCATTGGGATATCTG
 GAGAGAGCATCATTCGTTGTGATGAAGATGAAGCTCACCTTGCCTCTGTATATTG
 CACTGTGTGTGCAACTCATTTGTGCTCTGAGTGTCTCAAGTTACTCATTCTACAA
 35 AGACATTAGCAAAGCACAGGCGAGTTCCTCTAGCTGATAAACCTCATGAGAAAA
 CTATGTGCTCTCAGCACCAAGGTGCATGCCATTGAGTTTGTGTTGCTTGAAGAAGG
 TTGTCAAACCTAGCCCACTCATGTGCTGTGTCTGCAAAGAATATGGAAAACACCAG
 GGTCAACAAGCATTCAAGTATTGGAACCAGAAGCTAATCAGATCCGAGCATCAATTT
 TAGATATGGCTCACTGCATACGGACCTTCACAGAGGAAATCTCAGATTATTCCAG
 40 AAAATTAGTTGGAATTGTGCAGCACATTGAAGGAGGAGAACAATCGTGGAAGA
 TGGAATTGGAATGGCTCACACAGAACATGTACCAGGGACTGCAGAGAATGCCCCG
 GTCATGTATTGAGCTTATTTTATGATCTACATGAAACTCTGTGTCGTCAAGAAG
 AAATGGCTCTAAGTGTGTTGATGCTCATGTTTCGTGAAAAATTGATTTGGCTCAG
 GCAGCAACAAGAAGATATGACTATTTTGTGTCAGAGGTTTCTGCAGCCTGCCTC
 45 CACTGTGAAAAGACTTTGCAGCAGGATGATTGTAGAGTTGTCTTGGCAAAACAG
 GAAATTACAAGGTTACTGGAAACATTGCAGAAACAGCAGCAGCAGTTTACAGAA
 GTTGCAGATCACATTCAGTTGGATGCCAGCATCCCTGTCACTTTTACAAAGGATA
 ATCGAGTTCACATTGGACCAAAAATGGAAATTCGGGTCTGTTACGTTAGGATTGGA
 TGGTGTCTGGAAAACTACTATCTTGTTTAAAGTTAAAACAGGATGAATTCATGCAG

CCCATTCCAACAATTGGTTTTAACGTGGAACTGTAGAATATAAAAAATCTAAAAT
 TCACTATTTGGGATGTAGGTGGAAAACACAAATTAAGACCATTGTGGAAACATT
 ATTACCTCAATACTCAAGCTGTTGTGTTTGTGTTAGATAGCAGTCATAGAGACAG
 AATTAGTGAAGCACACAGCGAACTTGCAAAGTTGTTAACGGAAAAAGAACTCCG
 5 AGATGCTCTGCTCCTGATTTTTTGCTAACAAACAGGATGTTGCTGGAGCACTGTCA
 GTAGAAGAAATCACTGAACTACTCAGTCTCCATAAATTATGCTGTGGCCGTAGCT
 GGTATATTCAGGGCTGTGATGCTCGAAGTGGTATGGGACTGTATGAAGGGTTGG
 ACTGGCTCTCACGGCAACTTGTAGCTGCTGGAGTATTGGATGTTGCTTGATTTTA
 AAGGCAGCAGTTGTTTGAAGTTTTGTGGTTAAAAGTAACTTTGCACATAGTATGT
 10 TTTAAGAAATTATACATCTCAAAAGATGGTAATTTAGGATGCATATATATATATA
 TATATATAAAGGAATCTTGGATTGGGAATTCAGTACTTTGCTTTAAAAAAATTTT
 GTGGCAGAATTAAATTTCTAATTGAGCAGATTAGATTGAATTAAATAGAACTTA
 TTGAATATACATTCTTTTAAAAAGTATATTTGTTATTTAAGTTTTTTCAGATAATAT
 GTGACCAATATACTGGGAAAGAGGTAGTCACAGAGAAAGGGTAAGTGAAGGTTT
 15 ATTCTTTCAGTGAAAAAAGAATAGCCAATTGAGTGCCTAATGAGACCTCTGTGTG
 AAGCAAGTGAAGTATAGCTGCTTCTTTTAACTGCCTTTTCACTGAATGTTGGCA
 GCATTTAGTAGTAGAAATGACAGTTGCTTAATGAAATAGAATCCAACTACATAT
 TTGGATAATAGGATTACTTTATGTTTATGTTTCAGAGTTAACAGAACACCTTTAAT
 GCTAAGAACTATAAGGTACAGAAAATTAATACTTTATATAGTGTTTTATTAAGTT
 20 TCTCCTACAGCATTTTGTATAAAACACAATGAGGGAGTGAAATGTTACCCAATTA
 GGCTTGTGAGGTTAGTAATAAACTGAACAGTAATAAACTGTGGAAGTAATTGG
 ATCTGAATTTATGAAAGACCCATTTCAGGACTGAACCTAGGTCAGAGCTCTAAA
 TTGGTCCTTCTATTTTTCAACAAATTTAAAGTAATATTTCTTTCTAATATAATATT
 GCATCCTTTGTGGGAATGACTATAGGTAAAATGTAGTAAGTAACGCAGAACCAG
 25 GGTGTTGGCTTTATTTAAAAGCTAGTGACCTAAATAGAAAGCGAACTTCAAGAGAA
 GTTGTAAGTACAGTGGCAAATGCTTATTACTTACTTCAAAGTGTTCCTCCAAAATA
 AGTGCATTTATTTTGACAATAAACTTAAGGCTGTTTCATGAGAAGGCCTTGAAAA
 GTTACTCTAGAGGAAAAATGTCTAAAGAAAAAAAATTCAAAAAGTTTACATT
 AATTATTCAGTGTGTGAGTAAATAAAAATGTGTGCTCTTTACTGTTTTTCATTTT
 30 TAAAGAATATTATTATGGAAGCACGATTTATTTAAATAGGTACATTGAGACTTTT
 TTTTTTAATGTTCTGATACATTAGGATGAAGTTAAATCTTAAATCTTATTAGTTGA
 ATTGTTGTAAGGACAGTGATGTCTGGTAACAAGATGTGACTTTTTGGTAGCACTG
 TTGTGGTTCATTCTTTTCAAATCTATTTTTGTTTAAAAACAATACAAGTTTTAGAA
 AACAAAGCATTAAAAAAAAGCCTATCAGTATTATGGGCAATATGTAAATAAAT
 35 AAATGTAATATTTTCATCCTTTATTTTTTCAGGTAAAAGGTCATGCTGTTACAGGTGT
 AGTTTGTGTGCATAAATAATACTTCCGAATTAAATTATTTAATATTTGACTGATTT
 CAATAACTGTGAAAATAAAAAGGTGTTGTATTGCTTGTGAG

SEQ ID NO: 102

40 >gi|577412|gb|U13666.1|HSU13666 Human G protein-coupled receptor (GPR1) gene,
 complete cds
 GGGCTGCAGTGAGCCAAAAGCATGCCATTGCACTCCAGCTTGGGCAACAGAGTG
 AGACCCTGTCTCAAAAAAAGAAAAAATAATACTATGTCTGGTCCATAACCTGA
 AATATTTTTATCTTCACGTTCCCTTATCATTCACTGAACTTTTATTTTTCTTTTAAAA
 45 TTTTTTCTTTCTTTTAAATTTGCTTCTACAGATTTCTTCATTCTCCATTTAGCAA
 GGTCATGGAAGATTTGGAGGAAACATTATTTGAAGAATTTGAAAACATTTCCTAT
 GACCTAGACTATTACTCTCTGGAGTCTGATTTGGAGGAGAAAGTCCAGCTGGGAG
 TTGTTCACTGGGTCTCCCTGGTGTATATTGTTTGGCTTTTGTCTGGGAATTCCA
 GGAAATGCCATCGTCATTTGGTTCACGGGGCTCAAGTGGAAGAAGACAGTCACC

ACTCTGTGGTTCCTCAATCTAGCCATTGCGGATTTCATTTTCTTCTCTTTCTGCCC
 CTGTACATCTCCTATGTGGCCATGAATTTCCACTGGCCCTTTGGCATCTGGCTGTG
 CAAAGCCAATTCCTTCACTGCCAGTTGAACATGTTTGCCAGTGTTTTTTTCTGA
 CAGTGATCAGCCTGGACCACTATATCCACTTGATCCATCCTGTCTTATCTCATCGG
 5 CATCGAACCCTCAAGAACTCTCTGATTGTCAATTATTCATCTGGCTTTTGGCTTC
 TCTAATTGGCGGTCCTGCCCTGTACTTCCGGGACACTGTGGAGTTCAATAATCAT
 ACTCTTTGCTATAACAATTTTCAGAAGCATGATCCTGACCTCACTTTGATCAGGC
 ACCATGTTCTGACTTGGGTGAAATTTATCATTGGCTATCTCTTCCCTTTGCTAACA
 ATGAGTATTTGCTACTTGTGTCTCATCTTCAAGGTGAAGAAGCGAACAGTCCTGA
 10 TCTCCAGTAGGCATTTCTGGACAATTCTGGTTGTGGTTGTGGCCTTTGTGGTTTGC
 TGGACTCCTTATCACCTGTTTAGCATTGGGAGCTCACCATTACCACAATAGCT
 ATTCCCACCATGTGATGCAGGCTGGAATCCCCCTCTCCACTGGTTTGGCATTCCTC
 AATAGTTGCTTGAACCCCATCCTTTATGTCCTAATTAGTAAGAAGTTCCAAGCTC
 GCTTCCGGTCCTCAGTTGCTGAGATACTCAAGTACACACTGTGGGAAGTCAGCTG
 15 TTCTGGCACAGTGAGTGAACAGCTCAGGAAGTCAAGAAACCAAGAATCTGTGTCT
 CCTGGAAACAGCTCAATAAGTTATTACTTTTCCACAAATCAGTATATGGCTTTTAA
 TGTGGGTCTCTGACTGATGCTTTCAGATTAAAATTGTTTCCAAGATAGAGAGCC
 GACTCCACTTTCATAGTTATTGTTTCTGGTCACATATATGGCATCACATTTT

SEQ ID NO: 103

>gi|1185462|gb|U38545.1|HSU38545 Human ARF-activated phosphatidylcholine-specific phospholipase D1a (hPLD1) mRNA, complete cds

GGCACGAGGAGCCCTGAGAGTCCGCCGCCAACGCGCAGGTGCTAGCGGCCCCCTT
 CGCCCTGCAGCCCCCTTTGCTTTTACTCTGTCCAAAGTTAACATGTCACTGAAAAA
 25 CGAGCCACGGGTAAATACCTCTGCACTGCAGAAAATTGCTGCTGACATGAGTAA
 TATCATAGAAAATCTGGACACGCGGGAAGTCCACTTTGAGGGAGAGGAGGTAGA
 CTACGACGTGTCTCCCAGCGATCCCAAGATACAAGAAGTGTATATCCCTTTCTCT
 GCTATTTATAACACTCAAGGATTTAAGGAGCCTAATATACAGACGTATCTCTCCG
 GCTGTCCAATAAAAAGCACAAAGTTCTGGAAGTGGAACGCTTCACATCTACAACAA
 30 GGGTACCAAGTATTAATCTTTACACTATTGAATTAACACATGGGGAATTTAAATG
 GCAAGTTAAGAGGAAATTCAAGCATTTTCAAGAATTTACAGAGAGCTGCTCAA
 GTACAAAGCCTTTATCCGCATCCCCATTCCCCTAGAAAGACACACGTTTAGGAGG
 CAAAACGTCAGAGAGGAGCCTCGAGAGATGCCAGTTTGCCCCGTTTCTGAA
 AACATGATAAGAGAAGAACAATTCCTTGGTAGAAGAAAACAACCTGGAAGATTAC
 35 TTGACAAAGATACTAAAAATGCCCATGTATAGAACTATCATGCCACAACAGAG
 TTTCTTGATATAAGCCAGCTGTCTTTCATCCATGATTTGGGACCAAAGGGCATAG
 AAGGTATGATAATGAAAAGATCTGGAGGACACAGAATACCAGGCTTGAATTGCT
 GTGGTCAGGGAAGAGCCTGCTACAGATGGTCAAAAAGATGGTTAATAGTGAAAG
 ATTCCTTTTTATTGTATATGAAACCAGACAGCGGTGCCATTGCCTTCGTCCTGCTG
 40 GTAGACAAAGAATTCAAAATTAAGGTGGGGAAGAAGGAGACAGAAACGAAATA
 TGGAATCCGAATTGATAATCTTTCAAGGACACTTATTTTAAAATGCAACAGCTAT
 AGACATGCTCGGTGGTGGGGAGGGGCTATAGAAGAATTCATCCAGAAACATGGC
 ACCAAGCTTTCTCAAAGATCATCGATTTGGGTCATATGCTGCTATCCAAGAGAATG
 CTTTAGCTAAATGGTATGTTAATGCCAAAGGATATTTTGAAGATGTGGCAAATGC
 45 AATGGAAGAGGCAAATGAAGAGATTTTATCACAGACTGGTGGCTGAGTCCAGA
 AATCTTCCTGAAACGCCAGTGGTTGAGGGAAATCGTTGGAGGTTGGACTGCATT
 CTTAAACGAAAAGCACACAAGGAGTGAGGATCTTCATAATGCTCTACAAAGAG
 GTGGAAGTCTGCTTTGGCATCAATAGTGAATACACCAAGAGGACTTTGATGCGTC
 TACATCCCAACATAAAGGTGATGAGACACCCGGATCATGTGTCATCCACCGTCTA

TTTGTGGGCTCACCATGAGAAGCTTGTTCATCATTGACCAATCGGTGGCCTTTGTG
 GGAGGGATTGACCTGGCCTATGGAAGGTGGGACGACAATGAGCACAGACTCACA
 GACGTGGGCAGTGTGAAGCGGGTCACTTCAGGACCGTCTCTGGGTTCCTCCAC
 CTGCCGCAATGGAGTCTATGGAATCCTTAAGACTCAAAGATAAAAATGAGCCTG
 5 TTCAAACCTACCCATCCAGAAGAGTATTGATGATGTGGATTCAAACTGAAAG
 GAATAGGAAAGCCAAGAAAGTTCTCCAAATTTAGTCTCTACAAGCAGCTCCACA
 GGCACCACCTGCACGACGCAGATAGCATCAGCAGCATTGACAGCACCTCCAGTT
 ATTTTAATCACTATAGAAGTCATCACAATTTAATCCATGGTTTAAAACCCCACTTC
 AACTCTTTTACCCGTCCAGTGAGTCTGAGCAAGGACTCACTAGACCTCATGCTG
 10 ATACCGGGTCCATCCGTAGTTTACAGACAGGTGTGGGAGAGCTGCATGGGGAAA
 CCAGATTCTGGCATGGAAAGGACTACTGCAATTTTCGTCTTCAAAGACTGGGTTC
 ACTTGATAAACCTTTTGCTGATTTTATTGACAGGTACTCCACGCCCGGATGCCCT
 GGCATGACATTGCCTCTGCAGTCCACGGGAAGGCGGCTCGTGATGTGGCACGTC
 ACTTCATCCAGCGCTGGAACCTTCACAAAAATTATGAAATCAAATATCGGTCCCT
 15 TTCTTATCCTTTTCTGCTTCCAAAGTCTCAAACAACAGCCCATGAGTTGAGATATC
 AAGTGCCTGGGTCTGTCCATGCTAACGTACAGTTGCTCCGCTCTGCTGCTGATTG
 GTCTGCTGGTATAAAGTACCATGAAGAGTCCATCCACGCCGCTTACGTCCATGTG
 ATAGAGAACAGCAGGCACTATATCTATATCGAAAACCAGTTTTTCATAAGCTGTG
 CTGATGACAAAGTTGTGTTCAACAAGATAGGCGATGCCATTGCCCAGAGGATCCT
 20 GAAAGCTCACAGGGAAAACCAGAAATACCGGGTATATGTCGTGATACCACTTCT
 GCCAGGGTTTGAAGGAGACATTTCAACCGGCGGAGGAAATGCTCTACAGGCAAT
 CATGCACTTCAACTACAGAACCATGTGCAGAGGAGAAAATTCCATCCTTGGACA
 GTTAAAAGCAGAGCTTGGTAATCAGTGGATAAATTACATATCATTCTGTGGTCTT
 AGAACACATGCAGAGCTCGAAGGAAACCTAGTAACTGAGCTTATCTATGTCCAC
 25 AGCAAGTTGTTAATTGCTGATGATAAACTGTTATTATTGGCTCTGCCAACATAA
 ATGACCGCAGCATGCTGGGAAAGCGTGACAGTGAAATGGCTGTCATTGTGCAAG
 ATACAGAGACTGTTCTTCAGTAATGGATGGAAAAGAGTACCAAGCTGGCCGGT
 TTGCCCCGAGGACTTCGGCTACAGTGCTTTAGGGTTGTCCTTGGCTATCTTGATGAC
 CCAAGTGAGGACATTCAGGATCCAGTGAGTGACAAATTCTTCAAGGAGGTGTGG
 30 GTTTC AACAGCAGCTCGAAATGCTACAATTTATGACAAGGTTTTCCGGTGCCTTC
 CCAATGATGAAGTACACAATTTAATTCAGCTGAGAGACTTTATAAACAAGCCCGT
 ATTAGCTAAGGAAGATCCCATTCGAGCTGAGGAGGAAGTGAAGAAGATCCGTGG
 ATTTTTGGTGCAATTCCCCTTTTATTTCTTGTCTGAAGAAAGCCTACTGCCTTCTG
 TTGGGACCAAAGAGGCCATAGTGCCCATGGAGGTTTGGACTTAAGAGATATTCA
 35 TTGGCAGCTCAAAGACTTCCACCCTGGAGACCACACTGCACACAGTGACTTCCTG
 GGGATGTCATAGCCAAAGCCAGGCCTGACGCATTCTCGTATCCAACCCAAGGAC
 CTTTTGGAATGACTGGGGAGGGCTGCAGTCACATTGATGTAAGGACTGTAAACAT
 CAGCAAGACTTTATAATTCCTTCTGCCTAACTTGTA AAAAGGGGGCTGCATTCTT
 GTTGGTAGCATGTACTCTGTTGAGTAAAACACATATTCAAATTCCGCTCGTGCCG
 40 AATTC

SEQ ID NO: 104

>gi|1010012|gb|H57180.1|H57180 yr10f05.s1 Soares fetal liver spleen 1NFLS Homo sapiens
 cDNA clone IMAGE:204897 3' similar to gb:X14034 1-PHOSPHATIDYLINOSITOL-4,5-
 45 BISPHOSPHATE PHOSPHODIESTERASE GAMMA (HUMAN);
 CTCTCAATGGGCGCACGGGCTACGTTCTGCAGCCTGAGAGCATGAGGACAGAGA
 AATATGACCCGATGCCACCCGAGTCCCAGAGGAAGATCCTGATGACGCTGACAG
 TCAAGGTTCTCGGTGCTCGCCATCTCCCCAACTTGGACGAAGTATTGCCTGTNC
 CTTTGTAGAAGTGGAGNTCTGTGGAGCCGAGTATGACAACAACAAGTTCAAGAC

GACGGTTGTGAATGATAATGGCCTCAGNCCTATCTGGGCTCCAACACAGGAGAA
GGTGACATTTGANATTTATGACCCAAACCTGGGNATTTTTTGGCGCTTNGTGGTTT
ATTGAAGGAAGGTATTGTTTCAGCGNTTCCCCAATTTTTTTGGNTCATGGCCACT
TTACCCCTTTAAAGGCAGTCAAAATCAGGGNTTCAGGGTNCCT

5

SEQ ID NO: 105

>gi|180602|gb|M58552.1|HUMCLG4Q01 Human collagenase type IV (CLG4) gene, exon 1
CAGGTCAACGGATCATCTGTTTCTGACCATTCTTCCCGTTCCTGACCCAGGGA
GTGCAGGGTGTCTAGCCAAGCCGGCGTCCCTCCTAGTAGTACCGCTGCTCTCTA
10 ACCTCAGGACGTCAAGGGCCTAGAGCGACAGATGTTTCCAGCAGGGGGTCTG
AGGCTGTGCGCCAGATCGCGAGAGAGGCAAGTGGGGTGACGAGGTCGTGCACT
GAGGGTGGACGTAGAGGCCAGGAGTAGCAGGCGGCCGGGGAAAAGAGGTGGAG
AAAGGAAAAAAGAGGAGAAAAGTGGAGGAGGGCGAGTAGGGGGGTGGGGCAG
AGAGGGGCGGGCCCGAGTGCGCCCCCGCCCCAGCCCCGCTCTGCCAGCTCCCT
15 CCCAGCCAGCCGGCTACATCTGGCGGCTGCCCTCCCTTGTTTCCGCTGCATCCA
GACTTCCTCAGGCGGTGGCTGGAGGCTGCGCATCTGGGGCTTTAAACATACAAA
GGGATTGCCAGGACCTGCGGCGGCGGCGGCGGCGGCGGGGGCTGGGGCGCGGG
GGCCGGACCATGAGCCGCTGAGCCGGGCAAACCCAGGCCACCGAGCCAGCGGA
CCCTCGGAGCGCAGCCCTGCGCCGCGGACCAGGCTCCAACCAGGCGGCGAGGCG
20 GCCACACGCACCGAGCCAGCGACCCCCGGGCGACGCGCGGGGCCAGGGAGCGCT
ACGATGGAGGCGCTAATGGCCCCGGGGCGCGCTCACGGGTCCCCTGAGGGCGCTC
TGTCTCCTGGGCTGCCTGCTGAGCCACGCCGCGCCGCGCCGTGCCCCATCATCA
AGTTCGCCGCGATGTCGCCCCCAAACGGACAAAGAGTTGGCAGTGGTGAGTT
GCT

25

SEQ ID NO: 106

>gi|37849|emb|X56134.1|HSVIMENT Human mRNA for vimentin
CGCGCCACCGCCCGCCAGGCCATCGCCACCCTCCGCAGCCATGTCCACCAGG
TCCGTGTCCTCGTCCTCCTACCGCAGGATGTTTCGGCGGCCCGGGCACCGCGAGCC
30 GGCCGAGCTCCAGCCGGAGCTACGTGACTACGTCCACCCGCACCTACAGCCTGG
GCAGCGCGCTGCGCCCCAGCACCAGCCGCAGCCTCTACGCCTCGTCCCCGGGCG
GCGTGTATGCCACGCGCTCCTCTGCCGTGCGCCTGCGGAGCAGCGTGCCCCGGGGT
GCGGCTCCTGCAGGACTCGGTGGACTTCTCGCTGGCCGACGCCATCAACACCGAG
TTCAAGAACACCCGCACCAACGAGAAGGTGGAGCTGCAGGAGCTGAATGACCGC
35 TTCGCCAACTACATCGACAAGGTGCGCTTCTGGAGCAGCAGAATAAGATCCTGC
TGGCCGAGCTCGAGCAGCTCAAGGGCCAAGGCAAGTCGCGCCTGGGGGACCTCT
ACGAGGAGGAGATGCGGGAGCTGCGCCGGCAGGTGGACCAGCTAACCAACGAC
AAAGCCCGCGTCGAGGTGGAGCGCGACAACCTGGCCGAGGACATCATGCGCCTC
CGGGAGAAATTGCAGGAGGAGATGCTTCAGAGAGAGGAAGCCGAAAACACCCT
40 GCAATCTTTCAGACAGGATGTTGACAATGCGTCTCTGGCACGTCTTGACCTTGAA
CGCAAAGTGGAATCTTTGCAAGAAGAGATTGCCTTTTGAAGAACTCCACGAA
GAGGAAATCCAGGAGCTGCAGGCTCAGATTCAGGAACAGCATGTCCAAATCGAT
GTGGATGTTTCCAAGCCTGACCTCACGGCTGCCCTGCGTGACGTACGTCAGCAAT
ATGAAAGTGTGGCTGCCAAGAACCTGCAGGAGGCAGAAGAATGGTACAAATCCA
45 AGTTTGCTGACCTCTCTGAGGCTGCCAACCAGGAACAATGACGCCCTGCGCCAGGC
AAAGCAGGAGTCCACTGAGTACCGGAGACAGGTGCAGTCCCTCACCTGTGAAGT
GGATGCCCTTAAAGGAACCAATGAGTCCCTGGAACGCCAGATGCGTGAAATGGA
AGAGAACTTTGCCGTTGAAGCTGCTAACTACCAAGACACTATTGGCCGCCTGCAG
GATGAGATTCAGAAATATGAAGGAGGAAATGGCTCGTCACCTTCGTGAATACCAA

GACCTGCTCAATGTTAAGATGGCCCTTGACATTGAGATTGCCACCTACAGGAAGC
 TGCTGGAAGGCGAGGAGAGCAGGATTTCTCTGCCTCTTCCAACTTTTCCTCCCT
 GAACCTGAGGGAACTAATCTGGATTCACTCCCTCTGGTTGATACCCACTCAAAA
 AGGACACTTCTGATTAAGACGGTTGAACTAGAGATGGACAGGTTATCAACGAA
 5 ACTTCTCAGCATCACGATGACCTTGAATAAAAAATTGCACACACTCAGTGCAGCAA
 TATATTACCAGCAAGAATAAAAAAGAAATCCATATCTTAAAGAAACAGCTTTCA
 AGTGCCTTTCTGCAGTTTTTTCAGGAGCGCAAGATAGATTGGAATAGGAATAAGC
 TCTAGTTCTTAACAACCGACACTCCTACAAGATTTAGAAAAAAGTTTACAACATA
 ATCTAGTTTACAGAAAAATCTTGTGCTAGAATACTTTTTTAAAAGGTATTTTGAAT
 10 ACCATTAAAACTGCTTTTTTTTTTCCAGCAAGTATCCAACCAACTTGGTTCTGCTT
 CAATAAATCTTTGGAAAACTA

SEQ ID NO: 107

>gi|2219635|gb|AA490462.1|AA490462 aa45b02.s1 Soares_NhHMPu_S1 Homo sapiens
 15 cDNA clone IMAGE:823851 3' similar to TR:G607132 G607132 AEBP1 MRNA. ;contains
 element TAR1 TAR1 repetitive element ;
 TTTTTTTTTTCCGTGCCATGAGCTTGTTTTATTGGAGTGACCTTGGCTCCCTCCCT
 CTGCCCCTACTCCAACACTGCAGCAACCCCATCTCTTACGAGACTGGCAGGTGGA
 GCAGGAGCCTCTACACAGCCTCTGGTCCTTAGGTCCCAGTCATGTTTGCACCCCC
 20 TCAAAGGGCTAGGACCAGCCCTTCCTTTCAGTGTCCATACCAGGGGGCCTTCCATG
 TGCTGATGGGTGATGTGACTGTGGTCAGCAGGCTTGGGAAGTGCTGCTGCTGTAG
 CTTGAGTTGGGCTGGGGTCTTGGTAGGACGCTGATCTCAGAAAGTCCCCAAAGTTC
 ACTGTGTAGGTCTCTACTGTTGTGAAGGGGAATGCCTGGCCAGTGCATCTCCT
 CCTCTTCTCCCTTCTCCTTCTCTTCTCCTCAAACCTCGGGTTTCAACTGGGTCTCAAAC
 25 TCAGACTCCAACCTGGGTCTCAAACACTGGCTCCAACCTTGGGCCCAAACCTTCGGG
 GTTCACCTCGGTCCCCAACTCTGGTAACAACTCTGTGTAAGGCTCAGTTTCCGC

SEQ ID NO: 108

>gi|1384184|gb|W74565.1|W74565 zd56e05.r1 Soares_fetal_heart_NbHH19W Homo
 30 sapiens cDNA clone IMAGE:344672 5' similar to SW:HEXP_LEIMA Q04832 DNA-
 BINDING PROTEIN HEXBP ;
 GGAGAAATGGGGCACCTGTCTAGATCTTGTCTGATAATCCCAAAGGACTCTATG
 CTGATGGTGGCGTTGCAAACCTTTGTGGCTCTGTGGAACATTTAAAGAAAGATTG
 CCCTGAAAGTCAGAATTCAGAGCGAATGGTCACAGTTGGTCGCTGGGCAAAGGG
 35 AATGAGTGCAGACTATGAAGAAATTTTGGATGTACCTAAACCGCAAAAACCCAA
 AACAAAAATACCTAAAGTTGTTAATTTTGTGATAACAGCTAGCACTATCATGAGTT
 ACTACCTCATTGTTACTTTCTAAACCCAGGCCCGCTTCACAAGTTAGAGTTGAG
 CTCCCCCTTGTANGCCAGGACTATGCCTGTAAGATATCCAGTAATGATCCTGGGG
 TGTGTCGCAAAAACCAA
 40 T

SEQ ID NO: 109

>gi|236181|gb|S57551.1|S57551 guanylate cyclase-coupled enterotoxin receptor [human, T84
 colonic cell line, mRNA, 3787 nt]
 45 TGGAGTGGGCTGAGGGACTCCACTAGAGGCTGTCCATCTGGATTCCCTGCCTCCC
 TAGGAGCCCAACAGAGCAAAGCAAGTGGGCACAAGGAGTATGGTTCTAACGTGA
 TTGGGGTCATGAAGACGTTGCTGTTGGACTTGGCTTTGTGGTCACTGCTCTTCCAG
 CCCGGGTGGCTGTCCTTTAGTTCCCAGGTGAGTCAGAACTGCCACAATGGCAGCT
 ATGAAATCAGCGTCCTGATGATGGGCAACTCAGCCTTTGCAGAGCCCCTGAAAA

ACTTGAAGATGCGGTGAATGAGGGGCTGGAAATAGTGAGAGGACGTCTGCAAA
ATGCTGGCCTAAATGTGACTGTGAACGCTACTTTCATGTATTTCGGATGGTCTGAT
TCATAACTCAGGCGACTGCCGGAGTAGCACCTGTGAAGGCCTCGACCTACTCAG
GAAAATTTCAAATGCACAACGGATGGGCTGTGTCTCATAGGGCCCTCATGTACA
5 TACTCCACCTTCCAGATGTACCTTGACACAGAATTGAGCTACCCCATGATCTCAG
CTGGAAGTTTTGGATTGTCATGTGACTATAAAGAAACCTTAACCAGGCTGATGTC
TCCAGCTAGAAAGTTGATGTACTTCTTGGTTAACTTTTGGAAAACCAACGATCTG
CCCTTCAAACCTTATTCTTGAGCACTTCGTATGTTTACAAGAATGGTACAGAAA
CTGAGGACTGTTTCTGGTACCTTAATGCTCTGGAGGCTAGCGTTTCTATTCTCC
10 CACGAACTCGGCTTTAAGGTGGTGTAAAGACAAGATAAGGAGTTTCAGGATATCT
TAATGGACCACAACAGGAAAAGCAATGTGATTATTATGTGTGGTGGTCCAGAGT
TCCTCTACAAGCTGAAGGGTGACCGAGCAGTGGCTGAAGACATTGTCATTATTCT
AGTGGATCTTTTCAATGACCAGTACTTGGAGGACAATGTCACAGCCCCTGACTAT
ATGAAAAATGTCCTTGTCTGACGCTGTCTCCTGGGAATTCCCTTCTAAATAGCTC
15 TTTCTCCAGGAATCTATCACCAACAAAACGAGACTTTCGTCTTGCCTATTTGAAT
GGAATCCTCGTCTTTGGACATATGCTGAAGATATTTCTTGAAAATGGAGAAAATA
TTACCACCCCCAAATTTGCTCATGCCTTCAGGAATCTCACTTTTGAAGGGTATGA
CGGTCCAGTGACCTTGGATGACTGGGGGGATGTTGACAGTACCATGGTGGTCTCTG
TATACCTCTGTGGACACCAAGAAATACAAGGTTCTTTTGACCTATGATACCCACG
20 TAAATAAGACCTATCCTGTGGATATGAGCCCCACATTCACCTTGAAGAACTCTAA
ACTTCCTAATGATATTACAGGCCGGGGCCCTCAGATCCTGATGATTGCAGTCTTC
ACCCTCACTGGAGCTGTGGTGCTGCTCCTGCTCGTCTCCTGATGCTCAGAA
AATATAGAAAAGATTATGAACTTCGTCAGAAAAAATGGTCCCACATTCCCTCCTGA
AAATATCTTTCCTCTGGAGACCAATGAGACCAATCATGTTAGCCTCAAGATCGAT
25 GATGACAAAAGACGAGATACAATCCAGAGACTACGACAGTGCAAATACGTCAAA
AAGCGAGTGATTCTCAAAGATCTCAAGCACAATGATGGTAATTTCACTGAAAAA
CAGAAGATAGAATTGAACAAGTTGCTTCAGATTGACTATTACACCCTAACCAAGT
TCTACGGGACAGTGAACTGGATACCATGATCTTCGGGGTGATAGAATACTGTG
AGAGAGGATCCCTCCGGGAAGTTTTAAATGACACAATTTCTACCTGATGGCAC
30 ATTCATGGATTGGGAGTTTAAGATCTCTGTCTTGTATGACATTGCTAAGGGAATG
TCATATCTGCACTCCAGTAAGACAGAAGTCCATGGTCGTCTGAAATCTACCAACT
GCGTAGTGGACAGTAGAATGGTGGTGAAGATCACTGATTTTGGCTGCAATTCCAT
TTTGCTCCAAAAAAGGACCTGTGGACAGCTCCAGAGCACCTCCGCCAAGCCAA
CATCTCTCAGAAAGGAGATGTGTACAGCTATGGGATCATCGCACAGGAGATCAT
35 TCTGCGGAAAGAAACCTTCTACACTTTGAGCTGTGCGGACCGGAATGAGAAGAT
TTTCAGAGTGGAATAATCCAATGGAATGAAACCTTCCGCCCAGATTTATTCTTG
GAAACAGCAGAGGAAAAAGAGCTAGAAGTGTACCTACTTGTAAAAAACTGTTGG
GAGGAAGATCCAGAAAAGAGACCAGATTTCAAAAAAATTGAGACTACACTTGCC
AAGATATTTGGACTTTTTTCATGACCAAAAAAATGAAAGCTATATGGATACCTTGA
40 TCCGACGTCTACAGCTATATTCTCGAAACCTGGAACATCTGGTAGAGGAAAGGA
CACAGCTGTACAAGGCAGAGAGGGACAGGGCTGACAGACTTAACCTTTATGTTGC
TTCCAAGGCTAGTGGTAAAGTCTCTGAAGGAGAAAGGCTTTGTGGAGCCGGAAC
TATATGAGGAAGTTACAATCTACTTCAGTGACATTGTAGGTTTCACTACTATCTG
CAAATACAGCACCCCATGGAAGTGGTGGACATGCTTAATGACATCTATAAGAG
45 TTTTGACCACATTGTTGATCATCATGATGTCTACAAGGTGGAAACCATCGGTGAT
GCGTACATGGTGGCTAGTGGTTTGCCTAAGAGAAATGGCAATCGGCATGCAATA
GACATTGCCAAGATGGCCTTGGAAATCCTCAGCTTCATGGGGACCTTTGAGCTGG
AGCATCTTCCTGGCCTCCCAATATGGATTGCGATTGGAGTTCACTCTGGTCCCTGT
GCTGCTGGAGTTGTGGGAATCAAGATGCCTCGTTATTGTCTATTTGGAGATACGG

TCAACACAGCCTCTAGGATGGAATCCACTGGCCTCCCTTTGAGAATTCACGTGAG
 TGGCTCCACCATAGCCATCCTGAAGAGAACTGAGTGCCAGTTCCTTTATGAAGTG
 AGAGGAGAAACATACTTAAAGGGAAGAGGAAATGAGACTACCTACTGGCTGACT
 GGGATGAAGGACCAGAAATTCAACCTGCCAACCCCTCCTACTGTGGAGAATCAA
 5 CAGCGTTTGCAAGCAGAATTTTCAGACATGATTGCCAACTCTTTACAGAAAAGAC
 AGGCAGCAGGGATAAGAAGCCAAAAACCCAGACGGGTAGCCAGCTATAAAAAA
 GGCACCTCTGGAATACTTGCAGCTGAATACCACAGACAAGGAGAGCACCTATTTTT
 AAACCTAAATGAGGTATAAGGACTCACACAAATTAATAACAGCTGCACTGAGG
 CCAGGCACCCCTCAGGTGTCCTGAAAGCTTACTTTTCTGAGACCTCATGAGGCAGA
 10 AATGTCTTAGGCTTGGCTGCCCTGTTTGGACCATGGACTTTCTTTGCATGAATCAG
 ATGTGTTCTCAGTGAAATAACTACCTTCCACTCTGGAACCTTATTCCAGCAGTTGT
 TCCAGGGAGCTTCTACCTGGAAAAGAAAAGAATTTTATTTTGTGTTGTTTA
 TTTTATCGTTTTTGTGTTACTGGCTTTCCTTCTGTATTCATAAGATTTTTTAAATTG
 TCATAATTATATTTTAAATACCCATCTTCATTAAAGTATATTTAACTCATAATTTT
 15 TGCAGAAAATATGCTATATATTAGGCAAGAATAAAAGCTAAAGGTTCCCAAAA
 AAAAAA

SEQ ID NO: 110

>gi|1563886|gb|U66198.1|HSU66198 Human fibroblast growth factor homologous factor 2
 (FHF-2) mRNA, complete cds
 20 ATGGCGGCGGCTATCGCCAGCTCGCTCATCCGTCAGAAGAGGCAAGCCCGCGAG
 CGCGAGAAATCCAACGCCTGCAAGTGTGTCAGCAGCCCCAGCAAAGGCAAGACC
 AGCTGCGACAAAAACAAGTTAAATGTCTTTTCCCGGGTCAAACCTCTTCGGCTCCA
 AGAAGAGGGCGCAGAAGAAGACCAGAGCCTCAGCTTAAGGGTATAGTTACCAAGC
 25 TATACAGCCGACAAGGCTACCACTTGCAGCTGCAGGCGGATGGAACCATTGATG
 GCACCAAAGATGAGGACAGCACTTACACTCTGTTTAACTCATCCCTGTGGGTCT
 GCGAGTGGTGGCTATCCAAGGAGTTCAAACCAAGCTGTACTTGGCAATGAACAG
 TGAGGGATACTTGTACACCTCGGAACCTTTTACACCTGAGTGCAAATTCAAAGAA
 TCAGTGTTTGAAAATTATTATGTGACATATTCATCAATGATATACCGTCAGCAGC
 30 AGTCAGGCCGAGGGTGGTATCTGGGTCTGAACAAAGAAGGAGAGATCATGAAAG
 GCAACCATGTGAAGAAGAACAAGCCTGCAGCTCATTTTCTGCCTAAACCACTGA
 AAGTGCCATGTACAAGGAGCCATCACTGCACGATCTCACGGAGTTCTCCCGATC
 TGGAAGCGGGACCCCAACCAAGAGCAGAAGTGTCTCTGGCGTGCTGAACGGAGG
 CAAATCCATGAGCCACAATGAATCAACGTAG

SEQ ID NO: 111

>gi|460288|gb|L29401.1|HUMLDLR01 Human low density lipoprotein receptor gene, exon 1
 GGATCCCACAAAACAAAAATATTTTTTTGGCTGTACTTTTGTGAAGATTTTATTT
 AAATTCCTGATTGATCAGTGTCTATTAGGTGATTTGGAATAACAATGTAAAAACA
 40 ATATACAACGAAAGGAAGCTAAAAATCTATACACAATTCCTAGAAAGGAAAAGG
 CAAATATAGAAAGTGGCGGAAGTTCCCAACATTTTATGTGTTTTCCTTTTGAGGC
 AGAGAGGACAATGGCATTAGGCTATTGGAGGATCTTGAAAGGCTGTTGTTATCCT
 TCTGTGGACAACAACAGCAAAATGTTAACAGTTAAACATCGAGAAATTCAGGA
 GGATCTTTCAGAAGATGCGTTTCCAATTTTGAGGGGGCGTCAGCTCTTCACCGGA
 45 GACCCAAATACAACAAATCAAGTCGCCTGCCCTGGCGACACTTTCGAAGGACTG
 GAGTGGGAATCAGAGCTTCACGGGTAAAAGCCGATGTCACATCGGCCGTTTCGA
 AACTCCTCCTCTTGCAGTGAGGTGAAGACATTTGAAAATCACCCCACTGCAAACT
 CCTCCCCCTGCTAGAAACCTCACATTGAAATGCTGTAAATGACGTGGGCCCCGAG
 TGCAATCGCGGAAGCCAGGGTTTCCAGCTAGGACACAGCAGGTTCGTGATCCGG

GTCGGGACACTGCCTGGCAGAGGCTGCGAGCATGGGGCCCTGGGGCTGGAAATT
GCGCTGGACCGTCGCTTGCTCCTCGCCGCGGCGGGGACTGCAGGTAAGGCTTGC
TCCA

5 SEQ ID NO: 112

>gi|789613|gb|R33755.1|R33755 yh82d06.r1 Soares placenta Nb2HP Homo sapiens cDNA
clone IMAGE:136235 5' similar to gb:X08058_ma1 GLUTATHIONE S-TRANSFERASE P
(HUMAN);

GGATCTGGTCTCCCAACAATGAAGGTCTTGCCTCCCTGGTTCTGGGACAGCAGGGT
10 CTCAAAGAGGCTTCAGTTGCCCAGGAGTCTTCACATAGTCATCCTTGCCCGCCT
CATAGTTGGTGTAGATGAGGGAGATGTATTTGCAGCGGAGGTCCTCCACGCCGTG
ATTCACCATGTCCACCAGGGCTGCCTCCTGCTGGTCTTCCCATAGAGCCCAAGG
GTGCGGGCCCAGGGTGACGCAGGATGGTATTGGACTGGTACAGGGTGAGGTCTC
CGTCCTGGGAACTTNGGGGAGCTGCCCGTATTAGGCANGGAGGCTTTTGAGTTGA
15 GCCCTCCTTNCGGCCGCAAGCTTATTTCCCTTTTAGTTGAGGGTTAANTTTAAGTT
TGGCAATTGGCCTTCTTTTAAAACTTCGTGATTGAGGAAAANCTGGGNTTTAA
CCAATTTA

SEQ ID NO: 113

20 >gi|181134|gb|M37435.1|HUMCSDF1 Human macrophage-specific colony-stimulating
factor (CSF-1) mRNA, complete cds

CCTGGGTCTCTCGGCGCCAGAGCCGCTCTCCGCATCCCAGGACAGCGGTGCGGC
CCTCGGCGGGGGCGCCCACTCCGCAGCAGCCAGCGAGCCAGCTGCCCCGTATGA
CCGCGCCGGGGCGCCGCGGGCGCTGCCCTCCCACGACATGGCTGGGCTCCCTGCT
25 GTTGTGTTGGTCTGTCTCCTGGCGAGCAGGAGTATCACCGAGGAGGTGTGCGAGTAC
TGTAGCCACATGATTGGGAGTGGACACCTGCAGTCTCTGCAGCGGCTGATTGACA
GTCAGATGGAGACCTCGTGCCAAATTACATTTGAGTTTGTAGACCAGGAACAGTT
GAAAGATCCAGTGTGCTACCTTAAGAAGGCATTTCTCCTGGTACAAGACATAATG
GAGGACACCATGCGCTTCAGAGATAACACCGCCAATCCCATCGCCATTGTGCAG
30 CTGCAGGAACTCTCTTTGAGGCTGAAGAGCTGCTTCACCAAGGATTATGAAGAGC
ATGACAAGGCCTGCGTCCGAACCTTCTATGAGACACCTCTCCAGTTGCTGGAGAA
GGTCAAGAATGTCTTTAATGAAACAAAGAATCTCCTTGACAAGGACTGGAATATT
TTCAGCAAGAACTGCAACAACAGCTTTGCTGAATGCTCCAGCCAAGATGTGGTG
ACCAAGCCTGATTGCAACTGCCTGTACCCCAAAGCCATCCCTAGCAGTGACCCGG
35 CCTCTGTCTCCCTCATCAGCCCCTCGCCCCCTCCATGGCCCCTGTGGCTGGCTTG
ACCTGGGAGGACTCTGAGGGAACTGAGGGCAGCTCCCTCTTGCCTGGTGAGCAG
CCCCTGCACACAGTGGATCCAGGCAGTGCCAAGCAGCGGCCACCCAGGAGCACC
TGCCAGAGCTTTGAGCCGCCAGAGACCCAGTTGTCAAGGACAGCACCATCGGT
GGCTCACCACAGCCTCGCCCCCTCTGTGCGGGGCCTTCAACCCCGGGATGGAGGATA
40 TTCTTGACTCTGCAATGGGCACTAATTGGGTCCCAGAAGAAGCCTCTGGAGAGGC
CAGTGAGATTCCCGTACCCCAAGGGACAGAGCTTTCCCCCTCCAGGCCAGGAGG
GGGCAGCATGCAGACAGAGCCCGCCAGACCCAGCAACTTCCTCTCAGCATCTTCT
CCACTCCCTGCATCAGCAAAGGGCCAACAGCCGGCAGATGTAAGTGTACAGCC
TTGCCAGGGTGGGCCCCGTGATGCCCACTGGCCAGGACTGGAATCACACCCCCC
45 AGAAGACAGACCATCCATCTGCCCTGCTCAGAGACCCCCCGGAGCCAGGCTCTC
CCAGGATCTCATCTACTGCGCCCCCAGGCCCTCAGCAACCCCTCCACCCTCTCTGC
TCAGCCACAGCTTTCCAGAAGCCACTCCTCGGGCAGCGTGCTGCCCTTGGGGAG
CTGGAGGGCAGGAGGAGCACCAGGGATCGGACGAGCCCCGCAGAGCCAGAAGC
AGCACCAGCAAGTGAAGGGGCAGCCAGGCCCTGCCCGTTTAACTCCGTTCTCT

TTGACTGACACAGGCCATGAGAGGCAGTCCGAGGGATCCTCCAGCCCGCAGCTC
CAGGAGTCTGTCTTCCACCTGCTGGTGCCAGTGTCATCCTGGTCTTGCTGGCTGT
CGGAGGCCCTCTTGTTCTACAGGTGGAGGCGGCGGAGCCATCAAGAGCCTCAGAG
AGCGGATTCTCCCTTGAGCAACCAGAGGGCAGCCCCCTGACTCAGGATGACAG
5 ACAGGTGGAACCTGCCAGTGTAGAGGGAATTCTAAGCTGGACGCACAGAACAGTC
TCTTCGTGGGAGGAGACATTATGGGGCGTCCACCACCACCCCTCCCTGGCCATCC
TCCTGGAATGTGGTCTGCCCTCCACCAGAGCTCCTGCCTGCCAGGACTGGACCAG
AGCAGCCAGGCTGGGGCCCCCTCTGTCTCAACCCGCAGACCCTTGACTGAATGAG
AGAGGCCAGAGGATGCTCCCCATGCTGCCACTATTTATTGTGAGCCCTGGAGGCT
10 CCCATGTGCTTGAGGAAGGCTGGTGAGCCCGGCTCAGGACCCTCTTCCCTCAGGG
GCTGCAGCCTCCTCTCACTCCCTTCCATGCCGGAACCCAGGCCAGGGACCCACCG
GCCTGTGGTTTGTGGGAAAGCAGGGTGCACGCTGAGGAGTGAAACAACCCTGCA
CCCAGAGGGCCTGCCTGGTGCCAAGGTATCCCAGCCTGGACAGGCATGGACCTG
TCTCCAGACAGAGGAGCCTGAAGTTCGTGGGGCGGGACAGCCTCGGCCTGATTT
15 CCCGTAAAGGTGTGCAGCCTGAGAGACGGGAAGAGGAGGCCTCTGCACCTGCTG
GTCTGCACTGACAGCCTGAAGGGTCTACACCCTCGGCTCACCTAAGTCCCTGTGC
TGTTTGCCAGGCCCAGAGGGGAGGCCAGCCCTGCCCTCAGGACCTGCCTGACCT
GCCAGTGATGCCAAGAGGGGGATCAAGCACTGGCCTCTGCCCCTCCTCCTTCCAG
CACCTGCCAGAGCTTCTCCAGCAGGCCAAGCAGAGGCTCCCCCTCATGAAGGAAG
20 CCATTGCACTGTGAACACTGTACCTGCCTGCTGAACAGCCTCCCCCGTCCATCC
ATGAGCCAGCATCCGTCCGTCTCCTCACTCTCCAGCCTCTCCCCAGCCTCCTGCACT
GAGCTGGCCTCACCAGTCGACTGAGGGAGCCCTCAGCCCTGACCTTCTCCTGAC
CTGGCCTTTGACTCCCCGGAGTGGAGTGGGGTGGGAGAACCCTCCTGGGGCCGCCA
GCCAGAGCCGCTCTTTAGGCTGTGTTCTTCGCCCAGGTTTCTGCATCTTCCACTTT
25 GACATTCCCAAGAGGGAAGGGACTAGTGGGAGAGAGCAAGGGAGGGGAGGGCA
CAGACAGAGAGCCTACAGGGCGAGCTCTGACTGAAGATGGGCCTTTGAAATATA
GGTATGCACCTGAGGTTGGGGGAGGGTCTGCACTCCCAAACCCCAGCGCAGTGT
CCTTTCCCTGCTGCCGACAGGAACCTGGGGCTGAGCAGGTTATCCCTGTCAGGAG
CCCTGGACTGGGCTGCATCTCAGCCCCACCTGCATGGTATCCAGCTCCCATCCAC
30 TTCTCACCCCTTCTTTCCCTCCTGACCTTGGTCAGCAGTGATGACCTCCAACCTCTCAC
CCACCCCTCTACCATCACCTCTAACCAGGCAAGCCAGGGTGGGAGAGCAATCA
GGAGAGCCAGGCCTCAGCTTCCAATGCCTGGAGGGCCTCCACTTTGTGGCCAGCC
TGTGGTGCTGGCTCTGAGGCCTAGGCAACGAGCGACAGGGCTGCCAGTTGCCCT
GGGTTCCCTTTGTGCTGCTGTGTGCCTCCTCTCCTGCCGCCCTTTGTCCTCCGCTAA
35 GAGACCCTGCCCTACCTGGCCGCTGGGCCCGTGACTTTCCTTCTGCCCAGGA
AAGTGAGGGTCGGCTGGCCCCACCTTCCCTGTCCTGATGCCGACAGCTTAGGGAA
GGGCACTGAACCTGCATATGGGGCTTAGCCTTCTAGTCACAGCCTCTATATTTGA
TGCTAGAAAACACATATTTTTAAATGGAAGAAAAATAAAAAGGCATTCCCCCTTC
ATCCCCCTACCTTAAACATATAATATTTTTAAAGGTCAAAAAAGCAATCCAACCCA
40 CTGCAGAAGCTCTTTTTGAGCACTTGGTGGCATCAGAGCAGGAGGAGCCCCAGA
GCCACCTCTGGTGTCCCCCAGGCTACCTGCTCAGGAACCCCTTCTGTTCTCTGAG
AACTCAACAGAGGACATTGGCTCACGCACTGTGAGATTTTGTGTTTATACTTGCA
ACTGGTGAATTATTTTTTATAAAGTCATTTAAATATCTATTTAAAAGATAGGAAG
CTGCTTATATATTTAATAATAAAAGAAGTGACAAGCTGCCGTTGACGTAGCTCG
45 AG

SEQ ID NO: 114

>gi|2179481|gb|AA456271.1|AA456271 zx99f08.r1 Soares_NhHMPu_S1 Homo sapiens
cDNA clone IMAGE:811911 5' similar to TR:E217390 E217390 NEOSIN ;

GGCGCCGCCATTTTAGCGTTTTGTCAGAAGCGTCCGCGCCGAGCGGCAGGAGGC
 CCTGCTGGTTTTCTGTGCGGGCTCTTGTGAGGATGGTGAAGCTGTTTCATCGGAAAC
 CTGCCCCGGGAGGCTACAGAGCAGGAGATTCGCTCACTCTTCGAGCAGTATGGG
 AAGGTGCTGGAATGTGACATCATTAAAGAATTACGGCTTTGTGCACATAGAAGAC
 5 AAGACGGCAGCTGAGGATGCCATACGCAACCTGCACCATTACAAGCTTCATGGG
 GTGAACATCAACGTGGAAGCCAGCAAGAATAAGAGCAAAACCTCAACAAAGTTG
 CATGTGGGCAACATCAGTCCCACCTGCACCAATAAGGAGCTTCGAGCCAAGTTTG
 AGGAGTATGGTCCGGTCATCGAATGTGACATCGTGAAAGATTATGCCTTCGTACA
 CATGGAGCGGGCAGAGGATGCAGTGGAGGCCATCAGGGGCCTTGATAACACAGA
 10 GTTTCAAGGTGGGATGTGTGTGGGCTG

SEQ ID NO: 115

>gi|3171911|emb|AJ001015.1|HSRAMP2 Homo sapiens mRNA encoding RAMP2

GGATATAGGCGCCCCACACCCGGGCCCCGGCTAAGCGCCGCGCCGCTCCTCGC
 15 CTCCTTGCTGCACGATGGCCTCGCTCCGGGTGGAGCGCGCCGGCGGCCCCGCGTCT
 CCCTAGGACCCGAGTCGGGGCGGCCGGCAGCCGTCCGCCTCCTCCTTCTGCTGGGC
 GCTGTCTGAATCCCCACGAGGCCCTGGCTCAGCCTCTTCCCACCACAGGCACAC
 CAGGGTCAGAAGGGGGGACGGTGAAGAACTATGAGACAGCTGTCCAATTTTGCT
 GGAATCATTATAAGGATCAAATGGATCCTATCGAAAAGGATTGGTGCGACTGGG
 20 CCATGATTAGCAGGCCTTATAGCACCCCTGCGAGATTGCCTGGAGCACTTTGCAGA
 GTTGTTTGACCTGGGCTTCCCCAATCCCTTGGCAGAGAGGATCATCTTTGAGACT
 CACCAGATCCACTTTGCCAACTGCTCCCTGGTGCAGCCACCTTCTCTGACCCCCC
 AGAGGATGTACTCCTGGCCATGATCATAGCCCCCATCTGCCTCATCCCCTTCCTC
 ATCACTCTTGTAGTATGGAGGAGTAAAGACAGTGAGGCCCAGGCCTAGGGGGCA
 25 CGAGCTTCTCAACAACCATGTTACTCCACTTCCCCACCCCCACCAGGCCTCCCTCC
 TCCCCTCCTACTCCCTTTTCTCACTCTCATCCCCACCACAGATCCCTGGATTGCTG
 GGAATGGAAGCCAGGGTTGGGCATGGCACAAGTTCTGTAATCTTCAAAATAAAA
 CTTTTTTTTTGA

30 SEQ ID NO: 116

>gi|2456985|gb|AA608557.1|AA608557 ae54a09.s1 Stratagene lung carcinoma 937218

Homo sapiens cDNA clone IMAGE:950680 3' similar to contains element MER24 MER24
 repetitive element ;

TTTTTCTTCTTATATTCTACTTTATTTGGTAAAACTCAGAACTAACAATTCACA
 35 TCCTCCCACCTTCTTCTTTCCGAAGAAGGCAGTTTGCAGAGACAAAAGGGCTGTG
 GCGTGGGGATCATCCACCATCTCCAGGTTTTACACCCAGGCTACCCATGGCTTGG
 CAGTCAGGCCTCTAGGCGATGCTCTCAGAGGCAATAGAAGAAAAGTAAAAGGAA
 GGTCTCACTTCACAGACAATGAAACCCTCCTAACCCTCTTCCCCACTACCCACAA
 CTCCCTACACTGCCAATCTAAATAAAAAGAGGACAATGCATGAGTGTGAGATAC
 40 ACATACACACACACATACACACACACACACGCACAGCTTCCTTTTCAGCCAAA
 GAACTGCAAAATCCTTCCCCGGAAGGAGGACAACCTGGCAACACCAATCAAGGCT
 TGGTGGTCTAAGGTGATGGCTGGAATCATGTGAGACTGGTAAAAATCCAGGGAG
 AAAATGTTTCACCTTCAGCTCATTCCCAAGTCTCTATGAAGCCCGCCCCACTTCCA
 CATAGGGGAACTGTGGCTCTGGGGGCAGCTGGCTTAGGGAAAGGCCTCCCATGG
 45 CCAAGAAGACGATGGTGGAGAGGAGGGGGAGGGGCAGCAGG

SEQ ID NO: 117

>83 BLOOD 231120.25 Incyte Unique

TGTTTCATGCTCATTGCTGTTTATTGAAACAAAAGAATCAGAAGAAGATCAGAATG
 AAGACAATAATAAAAAGCAGAAGCAGAAGTACAAGAAGAATAAAGAAAGAAAG
 GGAAAGAATTGTAGGAAGGAAAACTTGTAGAAGTAGAGGGTGGAGAGTGCAG
 AGAGGTGGAGTATGATGGGCAGTCCGATCTTTTCCATCTGGGCTTTCAGACAATG
 5 GGATATGTCATGGAAGGCTTCTTTAAACACCAGAAGAAATTCAGGATAAAGCTC
 AAAAAGAGCAGGCAATCGATAGGGGTTGAAAATCCACTCAGTAGGCCACGGAA
 GGACTTCAAGAAGGTTGATCGTTCTGTCGCTGGATGTTGTAGGTGTCCTACGTGA
 AGGCAATCGACATCTGGATGGCTGTGTGTCTGCNCTTTGTGTTTCGCTGCCTTGCTG
 GANTATGCNGTTCTNACTGTTGGATTCTTCNTCNTGATCTTCATTGGGTGCAATTA
 10 GAGTTGTTGGGCTTGAGTTGTTGTTCTCCCTCACTCTTTTCTGTAAACCTCATTCT
 TCTACAGTAAAGTGATCACTTGGTTTGCTTTCCTGCACTCTTCTTGACACTCCAGT
 CAACATTAGCCAAAGCAGGGAACAAGATATTTCTAATGTATTTTGAGGCTTGGA
 AGACAAGTCATCATGGTTAAACAACAGAGTACTATTAGGGGCTTGGGCTAGAGG
 CAGGTGAAGTTCAAATCCTGGTTCCCATACTTGTGCGTACACAGTCCCGACGCC
 15 AGGGGCGCACGCCTGCGCAAACACAGCACCTCCCGAGCCACGAGGGCCGCTCAC
 ACAGCAACCCACGACCCACGCGAGCCTGCCCGCGCACTAACACACTGGCCTTAA
 TGCCTTGCGCNCGTTGCACTCACGACCCTCACTTGCAAACACAGCAGAACCCCA
 CTGCGCCTTTTTTTTC

20 SEQ ID NO: 118

>gi|2079053|gb|AA419164.1|AA419164 zv35f12.r1 Soares ovary tumor NbHOT Homo
 sapiens cDNA clone IMAGE:755663 5' similar to gb:X07282 RETINOIC ACID
 RECEPTOR BETA-2 (HUMAN);, mRNA sequence

CACTAGGTCAGTGCATCTGCTTAATCTGTGGAGACCGCCAGACCGTTGAGGAACC
 25 GACAAAAGTAGATAAGCTACAAGAACCATTGCTGGAACACTAAAAATTTATATC
 AGAAAAAGACGACCCAGCAAGCCTCACATGTTTCCAAAGATCTTAATGAAAATC
 ACAGATCTCCGTAGCATCAGTGCTAAAGGTGCAGAGCGTGTAATTACCTTGAAA
 ATGGAAATTCCTGGATCAATGCCACCTCTCATTCAAGAAATGCTGGAGAATTCTG
 AAGGACATGAACCTTGACCCCAAGTTCAAGTGGGAACACAGCAGACACAGTCC
 30 TAGCATCTCACCCAGCTCAGTGGAAAACAGTGGGGTCAGTCAGTCACCACTCGTG
 CAATAAGACATTTTCTAGCTACTTCAAACATTCCCCAGTACCTTCAGTTCCAGGA
 TTAAAATGCAAGAAAAAA

SEQ ID NO: 119

35 >gi|186330|gb|M74782.1|HUMIL3B Human interleukin 3 receptor (hIL-3Ra) mRNA,
 complete cds

GCACACGGGAAGATATCAGAAACATCCTAGGATCAGGACACCCCAGATCTTCTC
 AACTGGAACCAACGAAGGCTGTTTCTTCCACACAGCACTTTGATCTCCATTTAAGC
 AGGCACCTCTGTCCTGCGTTCCGGAGCTGCGTTCCCGATGGTCCTCCTTTGGCTCA
 40 CGCTGCTCCTGATCGCCCTGCCCTGTCTCCTGCAAACGAAGGAAGATCCAAACCC
 ACCAATCACGAACCTAAGGATGAAAGCAAAGGCTCAGCAGTTGACCTGGGACCT
 TAACAGAAATGTGACCGATATCGAGTGTGTTAAAGATGCCGACTATTCTATGCCG
 GCAGTGAACAATAGCTATTGCCAGTTTGGAGCAATTTCTTATGTGAAGTGACCA
 ACTACACCGTCCGAGTGGCCAACCCACCATTCTCCACGTGGATCCTCTTCCCTGA
 45 GAACAGTGGGAAGCCTTGGGCAGGTGCGGAGAATCTGACCTGCTGGATTTCATGA
 CGTGGATTTCTTGAGCTGCAGCTGGGCGGTAGGCCCGGGGGCCCCCGCGGACGT
 CCAGTACGACCTGTACTTGAACGTTGCCAACAGGCGTCAACAGTACGAGTGTCTT
 CACTACAAAACGGATGCTCAGGGAACACGTATCGGGTGTGTTTTGATGACATCT
 CTCGACTCTCCAGCGGTTCTCAAAGTTCCACATCCTGGTGCGGGGCAGGAGCGC

AGCCTTCGGTATCCCCTGCACAGATAAGTTTGTCTCTTTTCACAGATTGAGATAT
 TAACTCCACCCAACATGACTGCAAAGTGTAATAAGACACATTCCCTTTATGCACTG
 GAAAATGAGAAGTCATTTCAATCGCAAATTTTCGCTATGAGCTTCAGATACAAAA
 GAGAATGCAGCCTGTAATCACAGAACAGGTCAGAGACAGAACCTCCTTCCAGCT
 5 ACTCAATCCTGGAACGTACACAGTACAAATAAGAGCCCGGGAAAGAGTGTATGA
 ATTCTTGAGCGCCTGGAGCACCCCCCAGCGCTTCGAGTGCGACCAGGAGGAGGG
 CGCAAACACACGTGCCTGGCGGACGTCGCTGCTGATCGCGCTGGGGACGCTGCT
 GGCCCTGGTCTGTGTCTTCGTGATCTGCAGAAAGGTATCTGGTGATGCAGAGACTC
 TTTCCCCGCATCCCTCACATGAAAGACCCCATCGGTGACAGCTTCCAAAACGACA
 10 AGCTGGTGGTCTGGGAGGCGGGCAAAGCCGGCCTGGAGGAGTGTCTGGTGACTG
 AAGTACAGGTCGTGCAGAAAACCTTGAGACTGGGGTTCAGGGCTTGTGGGGGTCT
 GCCTCAATCTCCCTGGCCGGGCCAGGCGCCTGCACAGACTGGCTGCTGGACCTGC
 GCACGCAGCCCAGGAATGGACATTCTTAACGGGTGGTGGGCATGGGAGATGCCT
 GTGTAATTTTCGTCCGAAGCTGCCAGGAAGAAGAACAGAAC

15 SEQ ID NO: 120

>gi|6981725|gb|U48730.2|HSU48730 Homo sapiens transcription factor Stat5b (stat5b)

mRNA, complete cds

CCGGGTAAACCATGGCTGTGTGGATACAAGCTCAGCAGCTCCAAGGAGAAGCCC
 20 TTCATCAGATGCAGGCGTTATATGGCCAGCATTTTCCCATTGAGGTGCGGCATTA
 TTTATCCCAGTGGATTGAAAGCCAAGCATGGGACTCAGTAGATCTTGATAATCCA
 CAGGAGAACATTAAGGCCACCCAGCTCCTGGAGGGCCTGGTGCAGGAGCTGCAG
 AAGAAGGCAGAGCACCAGGTGGGGGAAGATGGGTTTTTACTGAAGATCAAGCTG
 GGGCACTATGCCACACAGCTCCAGAACACGTATGACCGCTGCCCCATGGAGCTG
 25 GTCCGCTGCATCCGCCATATATTGTACAATGAACAGAGGTTGGTCCGAGAAGCCA
 ACAATGGTAGCTCTCCAGCTGGAAGCCTTGCTGATGCCATGTCCCAGAAACACCT
 CCAGATCAACCAGACGTTTGAGGAGCTGCGACTGGTCACGCAGGACACAGAGAA
 TGAGTTAAAAAAGCTGCAGCAGACTCAGGAGTACTTCATCATCCAGTACCAGGA
 GAGCCTGAGGATCCAAGCTCAGTTTGGCCCGCTGGCCCAGCTGAGCCCCCAGGA
 30 GCGTCTGAGCCGGGAGACGGCCCTCCAGCAGAAGCAGGTGTCTCTGGAGGCCTG
 GTTGCAGCGTGAGGCACAGACACTGCAGCAGTACCGCGTGAGCTGGCCGAGAA
 GCACCAGAAGACCCTGCAGCTGCTGCGGAAGCAGCAGACCATCATCCTGGATGA
 CGAGCTGATCCAGTGGAAGCGGCGGCAGCAGCTGGCCGGGAACGGCGGGCCCCC
 CGAGGGCAGCCTGGACGTGCTACAGTCCTGGTGTGAGAAGTTGGCCGAGATCAT
 35 CTGGCAGAACCGGCAGCAGATCCGCAGGGCTGAGCACCTCTGCCAGCAGCTGCC
 CATCCCCGGCCCAGTGGAGGAGATGCTGGCCGAGGTCAACGCCACCATCACGGA
 CATTATCTCAGCCCTGGTGACCAGCACGTTTCATCATTGAGAAGCAGCCTCCTCAG
 GTCCTGAAGACCCAGACCAAGTTTGCAGCCACTGTGCGCCTGCTGGTGGGCGGG
 AAGCTGAACGTGCACATGAACCCCCCCCCAGGTGAAGGCCACCATCATCAGTGAG
 40 CAGCAGGCCAAGTCTCTGCTCAAGAACGAGAACACCCGCAATGATTACAGTGGC
 GAGATCTTGAACAACCTGCTGCGTCATGGAGTACCACCAAGCCACAGGCACCCTT
 AGTGCCCACTTCAGGAATATGTCCCTGAAACGAATTAAGAGGTCAGACCGTCGT
 GGGGCAGAGTCGGTGACAGAAGAAAAATTTACAATCCTGTTTGAATCCCAGTTC
 AGTGTTGGTGGAAATGAGCTGGTTTTTCAAGTCAAGACCCTGTCCCTGCCAGTGG
 45 TGGTGATCGTTCATGGCAGCCAGGACAACAATGCGACGGCCACTGTTCTCTGGGA
 CAATGCTTTTGCAGAGCCTGGCAGGGTGCCATTTGCCGTGCCTGACAAAGTGCTG
 TGGCCACAGCTGTGTGAGGCGCTCAACATGAAATTCAAGGCCGAAGTGCAGAGC
 AACCGGGGCCTGACCAAGGAGAACCTCGTGTTCCCTGGCGCAGAACTGTTCAAC
 AACAGCAGCAGCCACCTGGAGGACTACAGTGGCCTGTCTGTGCTGCTGGTCCCAGT

20

>gi|1490144|gb|AA025156.1|AA025156 ze78h06.rl Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:365147 5' similar to gb:M11730 ERBB-2 RECEPTOR PROTEIN-TYROSINE KINASE PRECURSOR (HUMAN);, mRNA sequence

>gi|189177|gb|M58603.1|HUMNFKB Human nuclear factor kappa-B DNA binding subunit (NF-kappa-B) mRNA, complete cds

40

ATATCCACCTGCATGCCCACAGCCTGGTGGGAAAACACTGTGAGGATGGGATCT
GCACTGTAACCTGCTGGACCCAAGGACATGGTGGTCGGCTTCGCAAACCTGGGTAT
ACTTCATGTGACAAAGAAAAAAGTATTTGAAACACTGGAAGCACGAATGACAGA
GGCGTGTATAAGGGGCTATAATCCTGGACTCTTGGTGCACCCTGACCTTGCCTAT
5 TTGCAAGCAGAAGGTGGAGGGGACCGGCAGCTGGGAGATCGGGAAAAAAGAGCT
AATCCGCCAAGCAGCTCTGCAGCAGACCAAGGAGATGGACCTCAGCGTGGTGC
GCTCATGTTTACAGCTTTTCTTCCGGATAGCACTGGCAGCTTCACAAGGCGCCTG
GAACCCGTGGTATCAGACGCCATCTATGACAGTAAAGCCCCCAATGCATCCAAC
TGAAAATTGTAAGAATGGACAGGACAGCTGGATGTGTGACTGGAGGGGAGGAA
10 ATTTATCTTCTTTGTGACAAAGTTCAGAAAGATGACATCCAGATTCGATTTTATG
AAGAGGAAGAAAATGGTGGAGTCTGGGAAGGATTTGGAGATTTTCCCCACAG
ATGTTCATAGACAATTTGCCATTGTCTTCAAACTCCAAAGTATAAAGATATTA
TATTACAAAACCAGCCTCTGTGTTTGTCCAGCTTCGGAGGAAATCTGACTTGGA
ACTAGTGAACCAAAACCTTTCCTCTACTATCCTGAAATCAAAGATAAAGAAGAA
15 GTGCAGAGGAAACGTCAGAAGCTCATGCCCAATTTTTCGGATAGTTTTCGGCGGTG
GTAGTGGTGCCGGAGCTGGAGGCGGAGGCATGTTTGGTAGTGGCGGTGGAGGAG
GGGGCACTGGAAGTACAGGTCCAGGGTATAGCTTCCCACACTATGGATTTCTCTAC
TTATGGTGGGATTACTTTCCATCCTGGAATACTAAATCTAATGCTGGGATGAAG
CATGGAACCATGGACACTGAATCTAAAAAGGACCCTGAAGGTTGTGACAAAAGT
20 GATGACAAAAACACTGTAAACCTCTTTGGGAAAGTTATTGAAACCACAGAGCAA
GATCAGGAGCCCAGCGAGGCCACCGTTGGGAATGGTGAAGTCACTCTAACGTAT
GCAACAGGAACAAAAGAAGAGAGTGCTGGAGTTCAGGATAACCTCTTTCTAGAG
AAGGCTATGCAGCTTGCAAAGAGGCATGCCAATGCCCTTTTCGACTACGCGGTGA
CAGGAGACGTGAAGATGCTGCTGGCCGTCCAGCGCCATCTCACTGCTGTGCAGG
25 ATGAGAATGGGGACAGTGTCTTACACTTAGCAATCATCCACCTTCATTCTCAACT
TGTGAGGGATCTACTAGAAGTCACATCTGGTTTGATTCTGATGACATTATCAAC
ATGAGAAATGATCTGTACCAGACGCCCTTGCACTTGGCAGTGATCACTAAGCAG
GAAGATGTGGTGGAGGATTTGCTGAGGGCTGGGGCCGACCTGAGCCTTCTGGAC
CGCTTGGGTAACCTCTGTTTTGCACCTAGCTGCCAAAGAAGGACATGATAAAGTTC
30 TCAGTATCTTACTCAAGCACAAAAAGGCAGCACTACTTCTTGACCACCCCAACGG
GGACGGTCTGAATGCCATTCTAGCCATGATGAGCAATAGCCTGCCATGTTTG
CTGCTGCTGGTGGCCGCTGGGGCTGACGTCAATGCTCAGGAGCAGAAGTCCGGG
CGCACAGCACTGCACCTGGCTGTGGAGCACGACAACATCTCATTGGCAGGCTGC
CTGCTCCTGGAGGGTGATGCCCATGTGGACAGTACTACCTACGATGGAACCACAC
35 CCTGTCATATAGCAGCTGGGAGAGGGTCCACCAGGCTGGCAGCTCTTCTCAAAG
CAGCAGGAGCAGATCCCCTGGTGGAGAACTTTGAGCCTCTCTATGACCTGGATGA
CTCTTGGGAAAATGCAGGAGAGGATGAAGGAGTTGTGCCTGGAACCACGCCTCT
AGATATGGCCACCAGCTGGCAGGTATTTGACATATTAAATGGGAAACCATATGA
GCCAGAGTTTACATCTGATGATTTACTAGCACAAAGGAGACATGAAACAGCTGGC
40 TGAAGATGTGAAGCTGCAGCTGTATAAGTTACTAGAAATTCCTGATCCAGACAA
AACTGGGCTACTCTGGCGCAGAAATTAGGTCTGGGGATACTTAATAATGCCTTC
CGGCTGAGTCCTGCTCCTTCCAAAACACTTATGGACAACCTATGAGGTCTCTGGGG
GTACAGTCAGAGAGCTGGTGGAGGCCCTGAGACAAATGGGCTACACCGAAGCAA
TTGAAGTGATCCAGGCAGCCTCCAGCCCAGTGAAGACCACCTCTCAGGCCCCACTC
45 GCTGCCTCTCTCGCCTGCCTCCACAAGGCAGCAAATAGACGAGCTCCGAGACAGT
GACAGTGTCTGCGACACGGGCGTGGAGACATCCTTCCGCAAACCTCAGCTTTACCG
AGTCTCTGACCAGTGGTGCCTCACTGCTAACTCTCAACAAAATGCCCCATGATTA
TGGGCAGGAAGGACCTCTAGAAGGCAAAATTTAGCCTGCTGACAATTTCCACA
CCGTGTAAACCAAAGCCCTAAAATTCCACTGCGTTGTCCACAAGACAGAAGCTG

AAGTGCATCCAAAGGTGCTCAGAGAGCCGGCCCGCCTGAATCATTCTCGATTAA
CTCGAGACCTTTTCAACTTGGCTTCCTTTCTTGGTTCATAAATGAATTTTAGTTTG
GTTCACTTACAGATAGTATCTAGCAATCACAACACTGGCTGAGCGGATGCATCTG
GGGATGAGGTTGCTTACTAAGCTTTGCCAGCTGCTGCTGGATCACAGCTGCTTTC
5 TGTGTGTCATTGCTGTTGTCCCTCTGC

SEQ ID NO: 123

>gi|34036|emb|X12881.1|HSKER18R Human mRNA for cytokeratin 18

TCGTCCGCAAAGCCTGAGTCCTGTCCTTTCTCTCTCCCCGGACAGCATGAGCTTCA
10 CCACTCGCTCCACCTTCTCCACCACTACCGGTCCTTGGGCTCTGTCCAGGCGCC
CAGCTACGGCGCCCGGCCGGTCAGCAGCGCGGCCAGCGTCTATGCAGGCGCTGG
GGGCTCTGGTTCCCGGATCTCCGTGTCCCGCTCCACCAGCTTCAGGGGCGGCATG
GGGTCCGGGGGCTGGCCACCGGGATAGCCGGGGGTCTGGCAGGAATGGGAGGC
ATCCAGAACGAGAAGGAGACCATGCAAAGCCTGAACGACCGCCTGGCCTCTTAC
15 CTGGACAGAGTGAGGAGCCTGGAGACCGAGAACCGGAGGCTGGAGAGCAAAAT
CCGGGAGCACTTGGAGAAGAAGGGACCCAGGTCAGAGACTGGAGCCATTACTT
CAAGATCATCGAGGACCTGAGGGCTCAGATCTTCGCAAATACTGTGGACAATGC
CCGCATCGTTCTGCAGATTGACAATGCCCGTCTTGCTGCTGATGACTTTAGAGTC
AAGTATGAGACAGAGCTGGCCATGCGCCAGTCTGTGGAGAACGACATCCATGGG
20 CTCCGCAAGGTCATTGATGACACCAATATCACACGACTGCAGCTGGAGACAGAG
ATCGAGGCTCTCAAGGAGGAGCTGCTCTTCATGAAGAAGAACCACGAAGAGGAA
GTAAAAGGCCTACAAGCCAGATTGCCAGCTCTGGGTTGACCGTGGAGGTAGAT
GCCCCCAAATCTCAGGACCTCGCCAAGATCATGGCAGACATCCGGGGCCCAATAT
GACGAGCTGGCTCGGAAGAACCGAGAGGAGCTAGACAAGTACTGGTCTCAGCAG
25 ATTGAGGAGAGCACCAAGTGGTCACCACACAGTCTGCTGAGGTTGGAGCTGCT
GAGACGACGCTCACAGAGCTGAGACGTACAGTCCAGTCCTTGGAGATCGACCTG
GACTCCATGAGAAATCTGAAGGCCAGCTTGGAGAACAGCCTGAGGGAGGTGGAG
GCCCCGTACGCCCTACAGATGGAGCAGCTCAACGGGATCCTGCTGCACCTTGAGT
CAGAGCTGGCACAGACCCGGGCAGAGGGACAGCGCCAGGCCAGGAGTATGAG
30 GCCCTGCTGAACATCAAGGTCAAGCTGGAGGCTGAGATCGCCACCTACCGCCGC
CTGCTGGAAGATGGCGAGGACTTTAATCTTGGTGATGCCTTGGACAGCAGCAACT
CCATGCAAACCATCCAAAAGACCACACCCGCCGGATAGTGGATGGCAAAGTGG
TGTCTGAGACCAATGACACCAAAGTTCTGAGGCATTAAGCCAGCAGAAGCAGGG
TACCCTTTGGGGAGCAGGAGGCCAATAAAAAGTTCAGAGTTCATTGGATGTC
35

SEQ ID NO: 124

>gi|183986|gb|M11730.1|HUMHER2A Human tyrosine kinase-type receptor (HER2)

mRNA, complete cds

AATTCTCGAGCTCGTCGACCGGTCGACGAGCTCGAGGGTCGACGAGCTCGAGGG
40 CGCGCGCCCGGCCCCACCCCTCGCAGACCCCGCGCCCGCGCCCTCCAGCCG
GGTCCAGCCGGAGCCATGGGGCCGGAGCCGCAGTGAGCACCATGGAGCTGGCGG
CCTTGTGCCGCTGGGGGCTCCTCCTCGCCCTCTTGCCCCCGGAGCCGCGAGCAC
CCAAGTGTGCACCGGCACAGACATGAAGCTGCGGCTCCCTGCCAGTCCCGAGAC
CCACCTGGACATGCTCCGCCACCTCTACCAGGGCTGCCAGGTGGTGCAGGGAAA
45 CCTGGAACCTACCTACCTGCCCACCAATGCCAGCCTGTCCTTCTGCAGGATATC
CAGGAGGTGCAGGGCTACGTGCTCATCGCTCACAACCAAGTGAGGCAGGTCCCA
CTGCAGAGGCTGCGGATTGTGCGAGGCACCCAGCTCTTTGAGGACAACTATGCCC
TGGCCGTGCTAGACAATGGAGACCCGCTGAACAATACCACCCCTGTCACAGGGG
CCTCCCCAGGAGGCCTGCGGGAGCTGCAGCTTCGAAGCCTCACAGAGATCTTGA

AAGGAGGGGTCTTGATCCAGCGGAACCCCCAGCTCTGCTACCAGGACACGATTTT
GTGGAAGGACATCTTCCACAAGAACAACCAGCTGGCTCTCACACTGATAGACAC
CAACCGCTCTCGGGCCTGCCACCCCTGTTCTCCGATGTGTAAGGGCTCCCGCTGC
TGGGGAGAGAGTTCTGAGGATTGTCAGAGCCTGACGCGCACTGTCTGTGCCGGT
5 GGCTGTGCCCCGCTGCAAGGGGGCCACTGCCCCACTGACTGCTGCCATGAGCAGTGTG
CTGCCGGCTGCACGGGGCCCCAAGCACTCTGACTGCCTGGCCTGCCTCCACTTCAA
CCACAGTGGCATCTGTGAGCTGCACTGCCCAGCCCTGGTCACCTACAACACAGAC
ACGTTTGAGTCCATGCCCAATCCCGAGGGGCCGGTATACATTCGGCGCCAGCTGTG
TGA CTGCCTGTCCCTACA ACTACCTTTCTACGGACGTGGGATCCTGCACCCTCGTC
10 TGCCCCCTGCACAACCAAGAGGTGACAGCAGAGGATGGAACACAGCGGTGTGAG
AAGTGCAGCAAGCCCTGTGCCCCGAGTGTGCTATGGTCTGGGCATGGAGCACTTGC
GAGAGGTGAGGGCAGTTACCAGTGCCAATATCCAGGAGTTTGCTGGCTGCAAGA
AGATCTTTGGGAGCCTGGCATTCTGCCGGAGAGCTTTGATGGGGACCCAGCCTC
CAACACTGCCCCGCTCCAGCCAGAGCAGCTCCAAGTGTTTGAGACTCTGGAAGA
15 GATCACAGGTTACCTATACATCTCAGCATGGCCGGACAGCCTGCCTGACCTCAGC
GTCTTCCAGAACCTGCAAGTAATCCGGGGACGAATTCTGCACAATGGCGCCTACT
CGCTGACCCTGCAAGGGCTGGGCATCAGCTGGCTGGGGCTGCGCTCACTGAGGG
AACTGGGCAGTGGACTGGCCCTCATCCACCATAACACCCACCTCTGCTTCGTGCA
CACGGTGCCCTGGGACCAGCTCTTTCGGAACCCGCACCAAGCTCTGCTCCACACT
20 GCCAACC GGCCAGAGGACGAGTGTGTGGGCGAGGGCCTGGCCTGCCACCAGCTG
TGCGCCCGAGGGCACTGCTGGGGTCCAGGGGCCACCCAGTGTGTCAACTGCAGC
CAGTTCCTTCGGGGCCAGGAGTGCGTGAGGAATGCCGAGTACTGCAGGGGGCTC
CCCAGGGAGTATGTGAATGCCAGGCACTGTTTGCCGTGCCACCCTGAGTGT CAGC
CCCAGAATGGCTCAGTGACCTGTTTTGGACCGGAGGCTGACCAGTGTGTGGCCTG
25 TGCCCACTATAAGGACCCTCCCTTCTGCGTGGCCCGCTGCCCCAGCGGTGTGAAA
CCTGACCTCTCCTACATGCCCATCTGGAAGTTTCCAGATGAGGAGGGCGCATGCC
AGCCTTGCCCCATCAACTGCACCCACTCCTGTGTGGACCTGGATGACAAGGGCTG
CCCCGCCGAGCAGAGAGCCAGCCCTCTGACGTCCATCGTCTCTGCGGTGGTTGGC
ATTCTGCTGGTTCGTGGTCTTGGGGGTGGTCTTTGGGATCCTCATCAAGCGACGGC
30 AGCAGAAGATCCGGAAGTACACGATGCGGAGACTGCTGCAGGAAACGGAGCTG
GTGGAGCCGCTGACACCTAGCGGAGCGATGCCCAACCAGGCGCAGATGCGGATC
CTGAAAGAGACGGAGCTGAGGAAGGTGAAGGTGCTTGGATCTGGCGCTTTTGGC
ACAGTCTACAAGGGCATCTGGATCCCTGATGGGGAGAATGTGAAAATTCCAGTG
GCCATCAAAGTGTTGAGGGAAAACACATCCCCCAAAGCCAACAAAGAAATCTTA
35 GACGAAGCATACGTGATGGCTGGTGTGGGCTCCCCATATGTCTCCCGCCTTCTGG
GCATCTGCCTGACATCCACGGTG CAGCTGGTGACACAGCTTATGCCCTATGGCTG
CCTCTTAGACCATGTCCGGGAAAACCGCGGACGCCTGGGCTCCCAGGACCTGCTG
AACTGGTGTATGCAGATTGCCAAGGGGATGAGCTACCTGGAGGATGTGCGGCTC
GTACACAGGGACTTGGCCGCTCGGAACGTGCTGGTCAAGAGTCCCAACCATGTC
40 AAAATTACAGACTTCGGGCTGGCTCGGCTGCTGGACATTGACGAGACAGAGTAC
CATGCAGATGGGGGCAAGGTGCCCATCAAGTGGATGGCGCTGGAGTCCATTCTC
CGCCGGCGGTTACCCACCAGAGTGATGTGTGGAGTTATGGTGTGACTGTGTGGG
AGCTGATGACTTTTGGGGCCAAACCTTACGATGGGATCCCAGCCCGGGAGATCCC
TGACCTGCTGGAAAAGGGGGAGCGGCTGCCCCAGCCCCCATCTGCACCATTGA
45 TGTCTACATGATCATGGTCAAATGTTGGATGATTGACTCTGAATGTTCGGCCAAGA
TTCCGGGAGTTGGTGTCTGAATTCTCCCGCATGGCCAGGGACCCCCAGCGCTTTG
TGGTCATCCAGAATGAGGACTTGGGGCCAGCCAGTCCCTTGGACAGCACCTTCTA
CCGCTCACTGCTGGAGGACGATGACATGGGGGACCTGGTGGATGCTGAGGAGTA
TCTGGTACCCAGCAGGGCTTCTTCTGTCCAGACCCTGCCCCGGGCGCTGGGGGC

ATGGTCCACCACAGGCACCGCAGCTCATCTACCAGGAGTGGCGGTGGGGACCTG
 AACTAGGGGCTGGAGCCCTCTGAAGAGGAGGCCCCAGGTCTCCACTGGCACCC
 TCCGAAGGGGCTGGCTCCGATGTATTTGATGGTGACCTGGGAATGGGGGCAGCC
 AAGGGGCTGCAAAGCCTCCCCACACATGACCCAGCCCTCTACAGCGGTACAGT
 5 GAGGACCCACAGTACCCCTGCCCTCTGAGACTGATGGCTACGTTGCCCCCTGA
 CCTGCAGCCCCCAGCCTGAATATGTGAACCAGCCAGATGTTTCGGCCCCAGCCCC
 TTCGCCCCGAGAGGGGCCCTCTGCCTGCTGCCCCGACCTGCTGGTGCCACTCTGGAA
 AGGGCCAAGACTCTCTCCCCAGGGAAGAATGGGGTCGTCAAAGACGTTTTTGCCT
 TTGGGGGTGCCGTGGAGAACCCCGAGTACTTGACACCCAGGGAGGAGCTGCCC
 10 CTCAGCCCCACCCTCCTCCTGCCTTCAGCCCAGCCTTCGACAACCTCTATTACTGG
 GACCAGGACCCACCAGAGCGGGGGGCTCCACCCAGCACCTTCAAAGGGACACCT
 ACGGCAGAGAACCCAGAGTACCTGGGTCTGGACGTGCCAGTGTGAACCAGAAGG
 CCAAGTCCGCAGAAGCCCTGATGTGTCCTCAGGGAGCAGGGAAGGCCTGACTTC
 TGCTGGCATCAAGAGGTGGGAGGGGCCCTCCGACCACTTCAGGGGAACCTGCCA
 15 TGCCAGGAACCTGTCCTAAGGAACCTTCCTTCCTGCTTGAGTTCCAGATGGCTG
 GAAGGGGTCCAGCCTCGTTGGAAGAGGAACAGCACTGGGGAGTCTTTGTGGATT
 CTGAGGCCCTGCCCAATGAGACTCTAGGGTCCAGTGGATGCCACAGCCCAGCTTG
 GCCTTTTCCTTCAGATCCTGGGTACTGAAAGCCTTAGGGAAGCTGGCCTGAGAG
 GGGAAGCGGCCCTAAGGGAGTGTCTAAGAACAAAAGCGACCCATTCAGAGACTG
 20 TCCCTGAAACCTAGTACTGCCCCCATGAGGAAGGAACAGCAATGGTGTGAGTA
 TCCAGGCTTTGTACAGAGTGCTTTTCTGTTTAGTTTTTACTTTTTTGTTTTGT
 TTTAAAGACGAAATAAAGACCCAGGGGAGAATGGGTGTTGTATGGGGAGGCAAGT
 GTGGGGGGTCCCTTCTCCACACCCACTTTGTCCATTTGCAAATATATTTTGGAAAA
 C

25

SEQ ID NO: 125

>gi|340247|gb|M54930.1|HUMVIP89 Human vasoactive intestinal peptide and peptide
 histidine isoleucine mRNA, 3' end

30 GATCAAGTTTCATTAAAGAAGACATTGACATGTTGCAAAATGCATTAGCTGAA
 AATGACACACCCTATTATGATGTATCCAGAAATGCCAGGCATGCTGATGGAGTTT
 TCACCAGTGACTTCAGTAAACTCTTGGGTCAACTTTCTGCCAAAAAGTACCTTGA
 GTCTCTTATGGGAAAACGTGTTAGCAGTAACATCTCAGAAGACCCTGTACCAGTC
 AAACGTCACCTCAGATGCAGTCTTCACTGACAACTATACCCGCCTTAGAAAAACAA
 TGGCTGTAAAGAAATATTTGAACTCAATTCTGAATGGAAAGAGGAGCAGTGAGG
 35 GAGAATCTCCCGACTTTCAGAAAGAGTTAGAAAAATGATGAAAAAACCCCCC
 CCCC

SEQ ID NO: 126

>gi|1679601|emb|Y09479.1|HSEDG2 H.sapiens mRNA for G protein-coupled receptor Edg-
 2

40

45

CTGACACCTACAGCATCAGGTACACAGCTTCTCCTAGCATGACTTCGATCTGATC
 AGCAAACAAGAAAATTTGTCTCCCGTAGTTCTGGGGCGTGTTACACACCTACAAC
 CACAGAGCTGTCATGGCTGCCATCTCTACTTCCATCCCTGTAATTTACAGCCCCA
 GTTCACAGCCATGAATGAACCACAGTGCTTCTACAACGAGTCCATTGCCTTCTTT
 TATAACCGAAGTGGAAGCATCTTGCCACAGAATGGAACACAGTCAGCAAGCTG
 GTGATGGGACTTGGAATCACTGTTTGTATCTTCATCATGTTGGCCAACCTATTGGT
 CATGGTGGCAATCTATGTCAACCGCCGCTTCCATTTTCCTATTTATTACCTAATGG
 CTAATCTGGCTGCTGCAGACTTCTTTGCTGGGTTGGCCTACTTCTATCTCATGTTC
 AACACAGGACCCAATACTCGGAGACTGACTGTCAGCACATGGCTCCTTCGTCAG

GGCCTCATTGACACCAGCCTGACGGCATCTGTGGCCAACTTACTGGCTATTGCAA
 TCGAGAGGCACATTACGGTTTTCCGCATGCAGCTCCACACACGGATGAGCAACC
 GCGGGTAGTGGTGGTCATTGTGGTCATCTGGACTATGGCCATCGTTATGGGTGC
 TATACCCAGTGTGGGCTGGAAGTGTATCTGTGATATTGAAAATTGTTCCAACATG
 5 GCACCCCTCTACAGTGACTCTTACTTAGTCTTCTGGGCCATTTTCAACTTGGTGAC
 CTTTGTGGTAATGGTGGTTCTCTATGCTCACATCTTTGGCTATGTTTCGCCAGAGGA
 CTATGAGAATGTCTCGGCATAGTTCTGGACCCCGCGGAATCGGGATACCATGAT
 GAGTCTTCTGAAGACTGTGGTCATTGTGCTTGGGGCCTTTATCATCTGCTGGACTC
 CTGGATTGGTTTTGTTACTTCTAGACGTGTGCTGTCCACAGTGCGACGTGCTGGCC
 10 TATGAGAAATTCTTCCTTCTCCTTGCTGAATTCAACTCTGCCATGAACCCCATCAT
 TTAATCCTACCGCGACAAAGAAATGAGCGCCACCTTTAGGCAGATCCTCTGCTGC
 CAGCGCAGTGAGAACCCACCGGCCCCACAGAAGGCTCAGACCGCTCGGCTTCC
 TCCCTCAACCACACCATCTTGGCTGGAGTTCACAGCAATGATCACTCTGTGGTTT
 AG

15

SEQ ID NO: 127

>gi|3242744|gb|AC004126.1|AC004126 Human Chromosome 11q12.2 PAC clone
 pDJ606g6, complete sequence [Homo sapiens]

20

ACGAGGTCAGGAGATTGAGACCATCCTGGCCAAACGTGGCGAAACCACGTCTCTA
 CTAAAAATACAAAAATTAGCTGGGCGTCGTGGCGCATGCCTGTCATCCCAGCTAC
 TCAAGCCTGGCAACAGAGCGAGACTCTGTCTTAAAAAATAAAAGGGGGAAGAAG

25

GAGAGGGGAGGTCTGCCCCGAGCACAGCAAGGTTTCAGCCAGGTCTGCCAGGGCA
 AAGGAGGGCAGGATTCCACCTGCCTGTGGTCCCAGGGCAGAGCCAGGCAGCCCC
 ACCCTGAAATAGTTCTTGGGGTAAAGGCCTGAAACTTCCACACGCACCTTCATTAT

30

CCCAGCTCCATTTCCCTCCCTCTTTGCCATCATTTTTCTTTCTCCTTCTTTTTCTCCTT
 GGAGGTCTAGTCTCCTTTCCCCAATATGGTTCGGCCCAACACAAACTCCCCACAA
 GCAGATGTGGGTCAACCTTGCCCTCTGAGGTCAGGTTCTGCTAGCATTGTTGGGCCT

35

GCTGAGCTGGACACAGAGGAAGAAAAGCTCAGGGAGGCCTGGAGTGTAGCAGC
 TCAGTGTCCCTTGCATCAGCCCCGAGAGGGGCAAGGGGCTGCTTGAAGGTGCA
 GTCTTCCTCCTGCCTGGAGAGGCCATATTTTTCAGCAGTAGGACATACACCCCTG

40

GCAACCCTCAGGAGAGTTTACAGAAGCCGCGTTTAATGCTCTGAAATCGCAGAG
 TGAGGAAATTATTCCCTGCCACGGTGTTTTCAGTCCTTCTGCAAAGTCAAGAAG
 AAAATACCTGCTAGAGCTAGGAGGCCATCTCCTCTCCCCTCCTCATCACCCCTTTC

45

ACAGAGGGGATGAGCTCTGGGTCTTCACGATCTTTTCACTTTTGTCTAAAGCGTA
 ATAGAAATTGGGTTTTGCCACCATTTGTTTTATGTTTCCCTTTACCTTTCACTTAT
 GGCAAATGATATTGATTTTCCACTTATAATAGTGATGTAAACTTTCCTTTCAAAAC

TGAGCTTGCATTGATAACAACAAGTGAGTCAAGTAAATATCAACACAGTTTCAA
 AACCATAAAGTGGATGACAGTACTGGGAAGGAGCAGGTCGGGCAAGAGCTGCC
 AGGGTGGGACAGACTGAATCGAAGGAAGTGGAGGCTCCAGGACTACTTTGTTT

GACCTCCCTGAGCTCTGCCAGGTCTCTGGGTTCACCTCTCCTGTGGGCACCAT
 TCAAAGCCAGTTCTCCTGGCTGGCTGCTGGGCCAGCTGCCAAGGCTCGGACGCCA
 AGGGCACCAATGCCTAGCTCAGCCCCTGGCCCTCATTCCTTCTGGGAAGCTGAGA

AGGAGCTGGTCTGAAGCCCTGGGTGGGGAAAATCTTTTGGACCCGACTTTACTC
 CTGAGCCTGTGGCTGGGCTTCATGGGGAAGAGGAAAGGGGGCCACTCTCGGACA
 GTCTGTTTCAGCTCAGGGGCAGAAGGCAGCTGAAATTCAGAGCTGCTGCTCCAG

AAACTCCTGGTAGAGTTAGCAGGGCAAAGCTACATGCACAGAGCTGAAGGCACA
 CAAACTCCAGTTCCCAGAGCCGAATGGCTTTCCCTGAACCAGTATGAGGCCACAG
 GCTCGGAACACATGCCTGGAGATCAAGGCAGAGAGGAGAGCACTCCCTGCCAG

AGTCTCGCGACATGTACCCAGTCCTCCAAACCAGCTCGATGCCCCCTCCTGACTG

GGTCTTCCTGGGTCTCCTCCATCACAAAATGAAAGCACTTGGCTCTCTGGCTGCA
 AGGTGGACCCAGACTCCCCTGGCCCGAATTCTGTTTCCATACCAGTCTTCCCAA
 TCCCAAATGTGAGAGCTCGATGGGGTCAGGATCTCTTGCATCTCCAGGCCCTG
 CCCCCTCTGGCCAGCTTGGACCCTGCACTCAACAGGGGCCAGCAAGTATCTGGG
 5 GAGCACAGTCTAGTGCCCCAAACCTTCTGGCCATCTGATTCCCTGGCCCAGGTGG
 CCAGGTGCCTTGACACTTGGGGGCAGCTTGAGACGTGGGGGTGGCCTTCATGCTC
 GCTTATGCCCTAGACTACCCAGCTGGTTGTGCTGAGGCCATCAGCGCCTGGTTG
 TCCAGAACTCTCCCTGGCTTCCCTGAGTCCTGTTTCGGGCGGTGCTCTCCTGTGAT
 TGGCCTACGCCTGCTGGACCCCAAGCCTCAGCTTTGGCGTTGAAAGTACCACCAT
 10 CAGTGGTCCCGCCTCTCTGGAAGGTGAACGGTTCCTTCTTAAGAGTTGGCAAGAA
 ATAGGAAATGGGGGAGTTCTTGAGCTTAAGGATGGGAGAGGCACCTCCCTCCTC
 ACACCCTAGGGACCCATTGGTAAGGCACAAAGCATGCTTCCCACATTCTGTCACT
 CCAGGAGGCTTCCAGGCACAGCCCCAGCCCCCTCGAGGGGGCTCCTGTGTCTCTCC
 TAGCCCCAGATGCTGGACCTCCCTGGTACCTGAGTGTAGTCTTGGCTAAAAGATC
 15 CTAGAAAAGTGACCACAAGGAAACAACCAGAAAGGGGACTGAGAGGGCCGGAC
 CCGGCTCCTCCAGCACCAAGTGGCAGGAGATGAGGGAAGGGGGCCTACCTGAGAG
 GGCTGCCGTCAGCAATCCAGTGATCCCGAAGAAGAGCCACATGTCTGGAGCTGT
 CTCTGGCTGCTACGCGTGGCTGCCTGTGGGAAGCACCATCTTGGGGCCGGGAGGT
 GGACACGGCCGTTGTGCGCCCTGGCGCAGGTCTGCTCTACCCTTTGCTGTTCTTG
 20 TTCCTGTGTCTCTCTCTGCTCTCTCCTCTCCGACACGCATGCGATCAAACCCAACC
 TGTGAGTGTCTCACGCCTGCTTGTCTGCTTGTGGTTTTGGTCTGCAGGAAGCTGG
 GCTGCTGTTACAGGGGCTGGTGGGGAGAGCCCCAGCTGCCTGTGCTGGGAGCCC
 ACCCATCCAGGCTGCACCCCAAGAGTCACGGAGCCAGACACACGCATGCACACG
 CATCCATGCAGACACACTTCCCCGAGGGTCTTCTAAGAAGAAGGGAAGTGGAAG
 25 AGCCATGCCTCATTTCTGGTGGCCAGAAGAAAAAATTGATAATGTAGTAGCTGC
 TCAATCAGTACATATTGGAAGAGGGAGTGAATGACCCATTGCCTGTCCCGGTCTG
 TGTAATTTGGCTCTCTTGGATTAAATCCTGAGTTTTATCTTAACCTTAGGTGCAAT
 GGTGGTTGGGAAGGAGGGTGTGGTCTTGATGCACTTTTGGAGATAAGAGCCTAA
 GTCTCCCCTCAGAGAAATATAAATTGGGAAGGGCCTGAGAGATGGCCATCCCAC
 30 AAGTCCTTCTACAGGGAAGGGTGCCAAGGCCTTGTGGGAGCCGCCCGCTCAGAT
 GGCACAGTGGGGCCAGCTATCCCATCTCCAGGTACCAGACTGGGCATGCCTCCGT
 GGGAGTCAGGCATGGGAGCTGGGTCTACAAGGCTGAGCAGGATTTTGACAAACA
 GCAATCATGGGAGGCCTCTGGGCCAGAAGGAATAGCAGGAGCAAAGGGCTGAA
 GGAAGGAAGCCCAGGGCTGCCTGAGAAACCCCGAGTTGCCCCATTGCACTGCAG
 35 CAGACTGACGCTATAGGAAGAAGGCAGGGGCCAAGCGTGTTTAATTCCCATGGT
 ACTCCCTGTGGAGCATATGGTAGGAGGTGAATAAATGTTTATTGAATGAGAAAA
 GGAATAGATAATTTGGTTGTCCAAGCAGGGCCCTGGAAGTGGTCAAATCCAGAA
 GGGGTTTGGTTCCAAATCCTGGCCCTGCCTCAGTTGGTCCCATCCCAGGTCCACC
 TCTCCTGGCCCTCCACTTCCTGCATCCTTGCTTGTCTTCATTTCCCCAACATGTGG
 40 AATGAGGAGCGGTCTCCTCCATTGGGTTCGGTCCTAAAGGTGGGTGTATGCATT
 TGATGCGGCAAGTATTAGAGCCACGGGGAACCAGGCGCCCCCAGAGTGAGACTC
 CTCCCAGTCTGCCCCAGCGCCGGCACCTGCTGCCGCTGCCCTCTGGTGGAAGTC
 ACTGGCAGCACAGGTTTGCATGGGTGCCTCGAGCTCCCAGATGCAATTCCATTCA
 TTTACACAGTCTTGGTGTGCAGAACTCTGGACAGGACTCTGTGGAAGCGAAAGA
 45 GAGGAAACCATATTCCTGCCCTCAAGGAGGATGAAGTTCACACACACACAAGTG
 ACCAAACCACAGGCCAAGGTAGGACACACATAATGTGAGGTCTCCTGGTCCTAA
 GAGGAACCCGTTTGAATGGGCCGGGAAGGATGGCTAGACTCCATTTCTGACAA
 TATGGTAGACAGCAGATGCTGAAGAATTCTCCTAATAACAAAACACCACAAAAAT
 ATTGTAAACCATCTTTTAAATGTGTAGCTGAGGTGGTGAGAAATGAAGAAAAT

CATCAGAGATCAAAAACGACAATAAGCCTGGGCAACATGGTGA AACCTCTCTC
TGCAAAAGGTGCAAAAATTAGCCAGGTTTGGTGGCACACACCTGCGGTCTCAG
CTACTCAGGAGGCTGAGGTGGGAGGATCGCTTGAGCCCAGGAGGTCAAGGCTTT
AATAAGCCAAGATTGCACTGCTGTACTCCAGCCTGGGCAACAGAGTGAGACCTT
5 GTATATGTTAATATATAAAGACAACAAAAATCCAAAGAGATCACAGCCAGCAGA
GAAGTATCTGTTGATCCAGTTGACCAAGAGCTTCAGTCTTATGAACATGGACAAA
AGTTAAAGCTGAGAAACAAAATCGAAGTGAAAAACAAAATCCAAAATTTCTGCC
TTAAACAAAGAGCACTGAAATACAACATCCACAGTGGAGAACTCGGAGAGAAA
AATTCCTTAAAGCGAGCTGACACAGAGCTTGCCCAACTCAGTATGGACTCTGAGT
10 GGGAGAAAAATAAATGTCAACCCTGAATGCCCTCACCACAAGTCTACCCACTA
ATAGGCCTGGAGGTGAACTCATGGTGACTTTGTGGCAAAAACAACCACACAAA
AAACAAACAAACAAAAAGATAAGATAAGAATTTAAAGTAAGGTAAATAATAGC
TCCTTAGGCACGTGGCAGAAACAAATGATAAAAATTGTCTCTGGAGTAACTCATC
CTATATTCATGACTCAAAGAAATCCCACAGAAAAACTCCCATGGAACATGAGTTC
15 ACATGTTTGTA AAAACAGAAAAATCATAAAACACAGGACACAAGGTGCTTTAGGT
GAGAGGAGCACCAAGCAATAAACTAAAAATGCAGACCTTCGAACACATCTCAGA
TGTTGGAATTGCAGTATATATAATATAAAAATAAGGATGTTTCATATGCTTCAAGA
ATTAAAAGTTGGTAATTGAAAGTATAGATAAGGAACAAGAGACTATTTAAAGTG
ACCAGGAAGATTGAGGGAAAAAAAGCAAGCAGTTATGTAAAAACATAATTTTTG
20 AAAATAGAAGCCCAGTGTACAGATTAAACAGTAGATTAAAGGCTCAGCACTTTGG
GAAGCTAAGGCAGTCTGATGGCTTGAGGCCAGGAGTTCAAGACTAGCCTGGCTA
ACACAGTGAAACCCTGTCTCTATTA AAAAATACAAAAATTAGCCAGGTGAGGTGG
CACATGCCTGTAGTCCCAGCTACTCAGGAGGCTGTAGCACAAGAATTGCTTGAAC
CCAGGAGGCAGAGATTGCAGTGAGTCGAGATTGTGCCACTGCACTCCGGCCTGG
25 GTGAGAGTGAGACTCTGTCTCAAAAATAAATAAATAAATACATACATAAAAATA
AACAGCAGATTAAATATGGCTGAAGAGACA ACTACTGGGGTGAACAATAGATTTG
AAGAATTTACCCAGGATGGAGCACAGGAGGACAAAGTGGTGGAAAATATGAAA
GAGGCTAAGAGACATAGACAAGGAACAAGGATTTAAATATGTCTAATTAGAGTT
CTAGAAGAAAATGGAAAATTTCTAGACTTGATGAAAGACACAATCCTCAGATTC
30 TGGAAAGCTCCCCCAACCCAAGCATGATAAATAAAAAGAAATCTACACCAAACAT
TTTTGGTAGCAAAACTGCTGATCACTAGACAGAAGATGGATGAATGATGAAGTA
GATGGGCAGCTAATATGTCAATAACCAATAACTAAAGCCAGAAGGCGATGGAACA
ACATCTCAAAGTACTAATAAAAAAATAACTGTCAACCTTGACTATCTTTCAAGTA
TAAGGTTTAAAGATACATTTTCAGATGAAAATTGAGAGCATTTATAGCTAACAG
35 ACTCTCACCTAAGGGAATTCTAAAGGATGTTCTTCAAAAACAAGAAAAATAATCT
CAGAAAAAAAAGTCTAAGATTCAAGTAAGAATGGTGAGCAAAGAAATATGTAA
ACACAGAAGTGGATTTAATAAGCACTGATAGCATAAAATAATTACAAAAATGTC
CACTTTGTGGAGTTAGAAAAAAATGAAATAGGCTGGACATGGTGGCTCATGCCT
GTAATCCCAGCACTTTGGGAGGCTGAGGTGGTTGGATCACTTGAGGTCATGAGTT
40 TGAGAACAGCTTGGCCAAAACGGCTAAACCCCATCTCTACTAAAAATACAAAAA
TTAGCCAGGCGTGGTGGCTCGCATCTGTAGTCCCAGCTATGCAGGAGGCTGAGGC
AGGAGAATCACTTGAACTGGGAGGTGGAGGTTGCAGCGAGCCAAGACTGCACC
ACTGCACTCCAGCCTGGGCGACAGAGCAAGACTCTGTCTCAAAAAA AAGAA
AAAAAAATTA AAAAAGAAAAA AAGAAATGAGATAAACTAAAGAACATAAAAC
45 AATAACAAATTGGTGAGGAGTGATCAGAGTGGGAAAGGTCTATTATTTGGTGGG
AGGGCAAAATATTGACTAGCATTTGACCTTGTTC AATTAAACATGCATGTAAAC
TAGTTGAACAATAAAATGGA ACTTGTGGGGAGAGAAGCCTGCTGTAAAGCCAA
AGAGGGCAGGAAACGAAAAGAAAGAAATGAAAGGGAGAATAGGACAAACAGA
AGCGTTGGTAGGTTTCAGCAGGTAGCTCAGGTGTAGGGTGGCGGGAAGGGTGCT

CTTGACAGGGCACAGGGTAAGTAGAGGCAAGACAGCATGATGTGAGTGTTGCTG
GGGCTGGATTGACATGATACACCCACAGGCAGCCCATGTTTCACAGACTCGAAGTT
TCAAAAATGAAGCTGAAAGGTGCACCCAGCTGGGTGTCCAAATCAATGAGCTCA
TTTTTATTTAGAACTCTTGGAGCAGGACCTTGTGAACTCAATTTGCAAGGGACAC
5 CCAGTGGCTCTGCACCCTGTGGAGAACTCAGGAGTTTTTCATCCAGACTGTATCT
CTCTTCTGACCTTCACCCAACAAATTGGAATAAGCAACATTACTGAGGGAAGCCC
GACTCTCCCACCAGAAGGAAGAGAGGACCTAGAACTGAAAGGCCGCCACCCTCA
CCATGTGGCACGTGGGAAAGTTTAATGCTGACGGGTACTTAGTGAGCACTTCCTA
TTGTGCCAGACACTTTATATGGAACCTTAACCCTCAGTTCTCATTACAACCTCAACC
10 AAGTAGAATGTGTCCTTAGCACAGCCTTGCAGATAATGACACTGAAGTTAGAGA
GGTAGTTTGCTCAAGATCCCACAATAAGAAGTAGTAGGGGTAGGCTCTGAACT
CAGGTCTGTTTGGATGAAGACCCTGGGCTCTTAACCACAGGGGTGGGTTGTGGTA
CAAGCATAAAGGCTTTGGCTGAAACATGGCACACGGGCAGGAAAGGCTCTGGT
TCTACGAGACTCTAAATTTTGGACCAGCCCTGCTCCTGGGCCAAGCCAAACCCAC
15 TCCTTAGTCTCTTGAATCCCGAAATTTCTCAGTCCTGACCACAGTCTCCAAACCAG
CTACAGCCAAACCTTGTGTTTCCCTGAGGCCCAGAATTTTCTACCATGTTCTAAATA
TTTAGCATCTAAATGTACATACATTAGCTCTAATCACTTAGTCACTCATTCAACAC
AACTTTATCTGTGTTCTAGGTGCTGGGGACACTACACGGACCAAAACAGACAAAT
ATCCCTGTTTTTACAGAGCTTATATTTTAGTGAGAGAGAAACATAATCAACAATA
20 GACATAATAAATAGGTTATATGGAAGGAAAGAAACAGAGCCGTGTAAGAGAGG
CTAGGAGTGTGAACAGGGGTTACAATTGTAAATGGGTAGTAGCTTAACTTAGCCT
CTTCCCCCTCAAATGGAGCCTGGAACAAGGGCTTGTTTGCAGACAGGTTATTTGGG
AATGCGATCCGAGGGAACAGGTTGAGGAACAAAGAGAAGAGAAATAGGAAAAG
AAGGAAAGTCAATAAAAGGATGCCTCATTGATTTGGCCACACTACGGACAATA
25 GTACTCGATCTCAGACTTCTGAAATGGTTCTCATAACTATCTGTCCATGTGTGGTC
TCCATTCCCTACCACCCATTGCACCAGCACTGATGTGGCCAATGGAGAGAAGCTGG
CTAATGTCCTCTTGATAGTCGTAGGCCTCCCTGTGGTAGAGCTTCTCTACTGGACA
TTAACATACATCGTGTCCATCCACATGCCTCTACCCAGATATCCTTGCCTCTGAT
TTTCCAGTCTTGTTCCCTTCCAGGCCCTGCCAGGAGTCCATGTATATCTATACCT
30 CCACTTGTTTCCATATACAGTCCACGAATGACCAAAGGTACTATCCCATCTCTGC
CTACTGCCAGTATTTCCCTTTACCATTGTTCTTCAGAGCCACCTCTGAGTGAGGTT
ATAGTATAGCTTCTGTCCATTTCTGGCTAGTAACAACCGATTGTGCTGCCCCATTT
GTGAACCAGGTCTGAAGTTTTCCACTTCTATCAGAAAGAGCTTTCTCAAGGCCAT
AGATGTGAGTTAAAAGAGAAATATGGGGCCGGGCGTGGGGGTTACACCTGTCA
35 TCCCAGCACTTTGGGAGGCCGAGGTGGGTGGATCATGAGGTCAGGAGTTCGAGA
TCAGCCTCGGCAAGATGGTGAAACCCCGTCTCTACTAAAAATAAAAAAAAAAAAA
AAAATTAGCCAGGTGTGGTGGCAGGCACCTGTAATCCCAGCTACTTGGGAGGCT
GAGGCAGAGAATTGCTTGAACCCGGGAGGCAGAGGTTGCAGTGAGCCGAGATCA
CACCCTGCACTCCAACCTTGGGCAACAGAACGAGACTCAGTCTCAGGAAAAAAG
40 AGAGACAGAGAGAAATATGGATGCAAAAGAGGCAGGTGCCATCTGTCCATGTAA
CTTACTTGTACCTTCTGGTTCTGTTTGGGTTTGAAGCAATTGTACAGCTGCTGCCC
CTCTCCCCAGATCTTATAGCCTGGTGTGTGATGGGGTCTTGTGGTCCCCTAGTTGT
TGGTGACCCATCTTCAGGCACAAGTCTCTATCAGGGCCCAGTAGCACCCCTAGGAT
ATGATTTTCAAGTGACAAGCATTCTCTACTGCAGGAGCCATGGCTTTGGTTCAG
45 CACCCTAGAGGTTTGTGCTGCAAAATTCTCTTTTTTGGAGCCTTCCAGAGACTCCA
TATGGCATCCTTATCCATGTGGCATCTCTGATATGACTGAACACGATTGTTCGTAG
GGCGTCACAGCAGCTTGCACCATTCCTGGACCTGCCACAGAGCCTTCTCTCGTG
CTGGGCCTCCCTCGGCACTAGCAGCCCCTCAAGTCACATGATAAATGGTCCGACA
GAATTCCCCAGGATGCTTTAAATCCAGAAGTACCCACCCTGTGCTGTGCCTTGT

TCTTACTGATGGGGGATGCAAGTTACAAAGGCTTGTTCTTTACCCTAGAGATAAT
GTCCCAACATGCCCCAGACCTTGGGACCCTTAAAAATCTTTCCCAATGTGGCAGCC
ACCAAAATCTTTTTTGGAGCTTATTTCTTACCTTTTAGCATACAGAGGGCAGCAGTT
CTCAAATTTTTTGGTTCAGAAGACCCCTTTATATTCTTAAAAATTATGGAGGACCC
5 CATAGAACTTTTTGTTTCATGTGGGTAAATATCTACTGATATTTATCGTATTAAAAGTT
AAAAGTGAAGAACTCCGGAAGATGGAGAGTACAATCATGGGTACCAGAGGCTGGG
AAGGGTAGTGGGGATGGGGGAGTGGGGATGGTTAATGGGTACAAAAATATATAG
AATGAATAAGATTTAGTATTTGATAGCACAAACAGGATAATTACAGTCTACAATAA
TTTATTGTACATTTAAAAACAGCTAAAAGTTTATAATTGGATAGTTTCTAACACA
10 AAGAAAGGATAAATGCTTGAGGTGATGGACACACCATTTACCCTGATGTGATTAT
TACACATTATATACTTGTATCAAAATATCTCATGTAGGCCGGGGGCAGTGGCTCA
TGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGTGGATTGCCCAAGCTCA
GGGGTTCAAGACAAGCCTGACCGACATGGTGAAACCCCATCTCTACTAAAAATA
CAAAAAAAAAAATTATCCAGGCGTAATAGTGCGCACCTGTAATTCCAGCTACTCG
15 GGAGGCTGAGGCAGAAGAATCACTTGAACCTGGGAGGTGGAGGTTGCAGTGAGC
CGAAATAGTGCCACTGCACTCCAGCCTGGGTGACAGTGAGACTCTGTCTCAAAA
AAAACAAAAAAAAAACAAAAAAAAACTCACATACTCCATAAACGTATGTATACATA
CACACACCTACTATATACCCATAAAAAATTAAAAATTAAAAAAGTTTAAACAAAA
AACTGAGACATTTAAAAATTTTATTTAATACATTTTAAAAATATAAACAGCAAAT
20 CATTACATGTCAATATAAGTAACACTTTCTGTGAAAAATTACTGTATATCCCAAA
CCCCACAAAATTATTGGGGGCCGGGCATGGTGGCTCACTCCTGTAATCCCAACAA
TTTGGGAGGTGAGGGGAGCTGATCACCTGAGGTCAGGAGTTCAAGACCAGCCT
GGCCAATATGGTGAAACCCCTTCCCTACTAAAAATACAAAAATTAGCCAGGTGT
GGTGGTGGGTGCCTGTAATCCACCTACTTGGGAGGCTGAGGCAGGAGAATGGC
25 TTGAACCCAAGCTGCAGAAGTTGCGGTGAGCCGAGATGGTGCCAGTGCACCTCTA
GCCTGGGTGACAGAGCGAGGCTCCGTCTAAAAAAATAAAATAAAATTATTGGGA
TATTATTGTTTTATATTTTTTGCAAATGTCTTGAACATCCAGCTTTGTAGAAGCCAC
CTGGATTTTCATATCTGCTTCTTCATTTAATTTGTGGAGATATGTTATTTAGATTG
AAGTATATGGGAAAAATCTGGTCTCACAATATGGAGTAGATAAAAGGAGGAGT
30 ATTTTAATAGGATTTTAAAAATAATTGTAGATATTCTTTTCTGATATTGAAAAGTT
GGCAAGTGATAGTTTCCAAAGGTTAGCTCCAATGTGAAATCTGAAATCATATCAA
AGACCTTTTATATATTTTTTCAAGTCCATTGTTCTATCTTGTACTTTGAATGGATCTC
TTATCCGTGCATGATTTTGTAAAAATATGTCTCAGTCATTGTGGAACATACTGTTT
TACAGTCCATTTTTTAAAAATCCATTGTTCTATCTTGTACTTTGAATGGATCTCTTAT
35 CCAGGCATGATTTTGTAAATAACATGCCTCAGTTATTGTAGAACATACTGGTTCAC
AGATGCAGAAGTTATTGAGATCTTCCAAATGTTGACATATTTCGTTACACAGTAT
CAAAAATCACATTCATTGATATCATCTCTGATCCCATCAGAGAAGTTTGAGTATT
GGAAAGATGTCAAGATCATGACACGGGTTTTCTAACATTTGAATTTTTACTTAAA
AGCTCTGATTTTCATCAATGGCAACAAATACTGTCTTTTTTCTTTCAAGTGACAGGCT
40 CACTTTGTTCATTTTCAAACAATTGTCTGCCAAATTTTAAAGTCTGAATAACCATA
GTTTCAAGTAAAAATGGTGTTCATGGGGGAAAACGTCTAGTTCAGCTGGCAAAT
CCAAAAATAGCACAAAGTGCTTTTTTTTCCAGAGCTACCTTCATACTGTAGTATTC
AGCAGGAGTGCTTTTTTGCTTACTTCTTATTTGTACATAGAATAAAGATTGTGCTT
TAATAATATTAATAATTTTAACTGCTTCATTGAGGACATTCTTAAATAAAAGAAC
45 GCATCCTCTGAATGCATCAGGATGAAAACTCCAACAGCTACTACTGCAGCTTGA
TGCCACTGCTATTTTTTTTTTTTTTTTTTTTTTTTTTTTGGCAAGGTGTCACCTGT
AGCCCAGTCTGGAGTGCAGTGGCGTGATCTTGGCTCACTGAAACCTCCACCTCCC
AGGTTTTAATGATTCTCCTGCCTCAGCTTTCTGAGAAGCTGGGATTACAGGCACG
TGCAACCATGCCTGGCTAATTTTTGTATATTTAGTAGAGACAGAGTTTAGCCATG

TTGGCCAGACTGATCTCAAACCTCCTGGCCTCAAATGAACTGCCTGCCACAGCCTC
CCAAAGTGTGGGATTACAGGCGTGAGCCACCGTGCCAGCCTGGCGCCAAGGC
TTTGATTCATGTGAAGGCACAAGTGGTTTTACTCATCATTGCTTTTGCTCCAGGCA
AATTATGTCAGTGAAAAAGGCAAATTGTATCTTTATGTTTATATGCAAATAATTT
5 TGAACCTCGTGGACCACTGAAAGGGTTTCAGGGATCCTTAGGGGTTTCATGAACCTC
ACTTTGAGAAGGGAGAGAAGAACCATTGGTGCTCAGAGCTGAAACTTAGCATCTT
GAATATCCGACCTAGTTCTTCTCCTAAGCATTACTTGAGACACGTAAGCTCTCTTC
AAGGGGCAGCCCAGCTCTCTGTTCCCCCTTATGTATAGGATTCCAAGGTGCCTGA
TCAGTTTCCATTGAAGTGTGGTGTCCACTGAACCCAACACTCTATGAAGGAACTA
10 ATCAGTCTGGGGTCTAGCAGAGTGAGGTCCCTGATACCAAATTTAACCTTTATTA
TAACAATCAAAGCCTCCGAACCTACATTAGAGGAATTCTGGAAAATTAGGAAAAG
AAAAAAAGTCACTATAGTCACACTACCTTGACAACCACTGTCATGCTGTAGCCT
AGGGTGGCCTAAAGGTTGACTCATCCTGAACTTCTTGTTGTTGAAAAAATCCCAG
GGCTATTTTTTTGTCTTGATGCTGCTAAGCCACATCATTCTGGCCCTTTCCAGTTG
15 GGTCTTAGGTTCCCAAGAGGGGGACCTGATATTCAGATCTATCCACTTCATTCAT
ATAGAGCTCCCCTGTCAGTGGTCCAGAACCCATTGCCCAATTGGACTAACCCCTTC
TAGCTTCATGTGATCTGCACATAGAATGCATCCATGTCAATGGCTCTTTCCTAAAT
TCCCTGTTGAGGCTTAGAAAATGATACCCCAAATAAAGTCCTCCACAGTAGCCTC
AGAAGCAACCATTTTTCTCTAACCTTCTGCCCTCAAGTCTCTCAGTCCCATGCTCC
20 CCCAAGATTAGCCATAGAACTGGAATCCCTCTTCTCCAAGGCAGGTAGAAACA
GAACCCTTTTCCCCCAAAGTCAGCCATAAAACCTAATTATATTACTCTACTCTAA
GTTTCCCTCCACCTTTCTGTATAAAAACTGGCCATAAAGAAATTTTCTTGGTTTCG
GCTTTGTTTGACTCTGTGTAGGTTGTAAGACTCCCATTCCAGAGAGAGCCCCGTC
CTACCCCCAGAAGGAAGGAATGCAGCACAGAGAGGCCAAAAAGAATCTAGAAC
25 CTGGGATACCAAGAAGAATCTAGAACCAGGATACCTAGAAGAATCTAGCCAGA
CAGGCCTTGTTGACTGTATGTAGGTCATAAGACTCCCATTCCAGCGAGAGTCCT
GTCCTACACCCAGAAGGAAGGAATGCAGCACAGAGAGGCCAGGAAGAATCTAG
ACAGACGGGCCTTGCTAGGTTTCCCCACTCAGTCCGTTAGCATTAGATCATACCC
TTAGGGAGCCTGGATAGCTCAGTCGGTAGAGCATTAGATCATAACGCTTTTTGTTC
30 AATTCTGTATCTACACGGCTGTCCACACTTTGCTGAACCTAAGCATCAAAGTGGA
CAAGTTCCTCGTCTCTTTGGGTATTCACTCTGTAGGCTCCCATGTACACACATTA
AATACATCTGTATGCTTTTTCTCCTATTTATATGCCTCTTCTCTGAGATTTTTCAGT
GAACTTCAGAGGGCAAAGGGAAGTTTCCCCCTTGGTGCCCCCACACCCCATGG
GAATCTTGGATTATAGCTCTTGATGGTGAAACCACCGGCACTGATGATGCATCCC
35 TTCTGTATTAGTTTTCTAGGCTGCTGTAACAAATTACTACAGACACGGTGTTTAA
AACATCAGAAATGTCTTCTCTCACAATTCTGGAGGCTGGAAGTCTAAAATGAAGG
TGTTGACAGGGCTGCTTTCCCTCAAGAGTCACTAGGGGAGAATCTGTTCCCTGCC
TCTTTTACCTCCTGGTGGCAGTGGGAGTTCCCTGGCATCCCTTGGCTTGTGGCTTC
TCTTCTATGAGGGTCTATCCAATCTCACTCTGCCTTTCTCTTGTTGCGGGCACTTGA
40 TATTTTAATTTTTTCCCAAACCTCTTGTTGTCACCTTCATAGGGCATTTCTGACAGCT
GTTAGGGTCCATCTCAATAGTCAAGAATAAGCTCCCTTCTTCAAGATCTTTAATTT
AAGCAAATATTTACCCCTACGAGGTAATATTCACAGGTTTCAGGGATTAGGATGT
GGACATATACTTTCATGGGGGAGGCACCATTCAGCAGACATTTATTTGTAGCAGC
AGTTTTTCAGCGAGGAATAATTTTGCCCCCAGGGGATGTTTGGTAATGTCTAAGAC
45 ATTTTTTCAGTTGTCACTGTGGGGGATGGAGTGCAGCAAGCATCTGTGAATAG
AGGCCAGGAACGCTGTTGAACACGCTACAGTTCACAGCACAGCTCCCCACAGCA
AAGAAGTATCTAGTCCAGAGTGCCAGTGGTGTGATGTTGAGAAATTCTGACTTA
CAGTAAATTAGTATTATAGTATACACTATCCGAAAAGCAACTGCTGTCATCCCTG
TCTCTAACTCTTTTTTATTATCGCCTTTATTACGTATGACATTAAATCTATTCTATC

CCATATTTATTTGCTTGTGTCTCTTTCCCATCCCAAGGGCAGAGATGTTTGTCTG
TTTCATTCACTGTTGTGTCCTCAGCACCTTGAATAGCACTCAGCACATTGTGAGCA
TTCTCAATATTTACTCAATTTATTAGTTAATAACGGTGCAGATATTTCTCTCTCT
CTCTCTCTCTTTCTCTCTCTCTGTCTGTCTGTCTCCAGGGTCTTGCTGTGTACCCCG
5 GGCTGAAATGCAATGGCACAATCATGGCTCAATGCAGCCTTGACCACCTAGGCTC
AAGAGATCCTCCACCTCAGCCTCCTGCCTGGCTAATTTTTTAAATTTTTTATAGAG
ATGGAGTTTTTATTTTATCTTATTTTTTGAGATGGAGTCTCGTTCTGTACCCAGG
CTGGAGTGCAGTGGCACAATCTCAGCTCACTGCAACCTCCACCTCCTGGATTCAA
GCGATTCTCCTGTCTCAGCCTCCCCAGTAGCTGGGATTACAGATACACGCCACCA
10 CACCCGGCTAATTTTTGTATTTTTAGTAGAGACAGGGTTTCACCATATTTGTGAGA
CTGGTCTCGAACTCCTGACCTCAGGTGATCCACCCTCCTCGGCCTCCCAAAGTGC
TGGGATTACAGGCGTGAGCTACCGCACCGCACCAGGCCTGAGTTGGAGTGTTGC
CAATTTGCCCAGGCCAATCTCGATCTCCTGGGCTCAAGCGATCCTCTCGCCTTCAT
CTCCCAAAGCTCTGGGGTTATAGGCATGAGCTACCACGCCTGGCAGGTACAGAC
15 ATTTCTTGAGCCCTTACTCTATGCCAGCCACCATGCTGGGTTATTATCTCTTTTTG
ATACTCACAAAACCCCTCTACGTTAAGTATAATTTTTCTCCTCCATTTCTCAGAT
AAAGAACTGAAGAGGTTAAGTTATTGCTGAAGATCACACAGCTCTTAAGAGGT
CAAACCAGGGCCCTTTCTCTGGTGACCCAACTCCAGAGTATTCCCTTGAGAGGA
TGTGACTTCTAGGTACCAGGCATGGTGCCAGGCACTGAAACAGAGAGGAAGAAA
20 ACACGAGCCCTGTCTTCAAAAAGTCACTAGTCCAGTGAGAGAAACAGGCAAGTA
AGCAGGCTCGTGTGACATGAGTTGCCGCGAGGGATGATGAGGGAGAACTGTTAT
AGGCTGGATGTTTGTCCCTCAATCTCATGCTGAAATGTAATCCCTAGTTTGGGA
GGTGGGGTCTGACAGGAGGTGATTGGATCGTTGTGGCAGATCCTTATGAATGGCT
CATCACCATCCCCATCCCTTATGGTAATAGGGAGTTCTTGCTCTGTAGTTTATGG
25 GAGATCTGGTTGTTTAAAAGACTCTGGGGTCTCCCCCTTCTCTCTTGTCTCTT
TGTCGCCATGTGACATGCTGGCTCCCTTTGCCTTCCATCATGATTGCAAGCTTCC
TGAGGCCTCACCAGAAGCAGATGCTGGCACTATGCTTCTTATGCAGCCTGCAGAA
CCATGAGCCAATTAAACCTCTTTTCTTTTCTTCTTCTTCTTCTTTTTTTTTTT
TTTGAGACAGAGTTTTGCTCTGTCTCCAGGCTGGAGTGCAGTAGCACAACTTG
30 GCTCACTGTAACTTCCACCTCCCAGGTTCAAGCAGTTCTCCTGCCTCAGTCTCCTG
AGTAGCTGGGATTACAGGTGCCGCCACCACACCCGGCTAGTTTTTGTATTTTA
GTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTTGTGAACCTCCTGACCTAGT
GATCTACCCGCTTCGGCCTCCCAAAGTGCTGAGATCACAGGCATGAGCCACCACG
CCCAGCACCTCTTTTCTTTTCTTTATAATTACTCAGCCTCAAGTATTTCTTTACGGC
35 CATGCAAGAACAGACTAACCAGGATCCCAGCCTTGAAAAATCAGGGGAGACTA
CTCAGAAGAGGTTACATCTGGGTCAAGTCCTGAGGGATCAGTATTCATGAGTCAT
AGAAAGTTCTAGGCTAGAGGAGCAGCATGTGCCAAGTTCCAGATGAAAGGCGGC
TGGAAGCTGACCATGGCTGAAGGCAGGGTGGGAGCAGGAGACATGGAGAGAGA
GCAGTCAGAGATGAACTTGGGAGTTGGTCCGGAAGGGGTTAATCCTGGAGGGCC
40 TGCAAAGTTGGACAAAGAAGTTGAGACTTTGTCCTAGAGAATCCAGAACCAGAG
GGTGCCCTTTCAGGGTTTCAAGCACGCTGGCTTCAGTGCTGAACGTGAACCGAAA
GGTCTACTGCAGTGGTTCAGGAAGGGAATGCTGGCTGCCCAAACAGGGGCAGT
GTTGTGGGGGTGAGAGAGAGATGGGTGGACACAAAACAGAATGACCAGGCAAC
ATCAATGGAACCTTAGGGGCAGGACCCTTGGGGATATCTGCAACAGGGGGCAGGC
45 ATGACTGCAATCCATTTTCTAAAAGGTGGGTGAGAATGAACACTTAATAAAATG
ATGTAAGAAGAAAAAACTATCTTTGGCAAAATGTTGCCTCCCCCTCCAGATCCCA
GTCTGTGGATGGCCTCACTCCTCCTGGGTGCTAAGGGACAGGGAAGACAATATG
AGGGTGTATCCTCTACTGTCATCCTCCCCACTGGGGGCCATGGCCTTCCACAAGC
CAGTCCACAGTCTATGTCTCATCCTAAGCTGTGGCCCTGGGAATGTGCTGCTGAT

TCATTCTGGCCCCATCGGCTTGGAAAGGTGTCTGCTCTGTCCTACTCCTTTCAAGG
CACCGGGCTGTCTTGTAGTCATGGGGATGGGGCCAAACATCAGTTCTCAACCTT
GTCCTGCCACAAGTAAATGATATCCACGGGCAGCCACTTGTCTCCATTGGGAAT
GGGAATGATGTGTGGACAATTCAGCGGTAGGTTACCTGCAATTCCTGGTGCACCT
5 GCTACACACCAGGGCATGCTGGGACTGACCACCCTGGAGTGAGCAGGATGTTAG
GATTGGTCACTGCAGCATAAGAAGCTGCTGTGGATGAATGCCTGCATAGCAGTC
AAAAAATTCCCCAGACTGTCACTGTCCTTCCCTCTACTTTGCCTCTCCTCAATCTG
TGGCTATTATGCTTTTATCCAGGTGGCTCAATTTTTTAATTTTACCTATTGTCAA
GCCAGGATCACCTACAGGTGTAGAGAGTGGGTTGGCCAGGTATAAGAGAAAT
10 CTAAATTGTTCTGAAGGTGTGAGGCAGGCCTTGGCTAGATCTGGGGGATAACCTT
GCCTCAACTGCAGGGGGCCACCTCTTGGTCTGCTTGCACAGTCTTGATGAGGCTG
TGTGTATTTGATGCTCACCTGTGAACATAAAAACCTGTGGGCAACACAGCAGGAT
GGTGCCAGTGCATTACTAAGAAATTGTACCTGGAGAGTGAAAGTTGGATCAAGG
TTTCATTGCTTCATTTTTTTTCAACCACATAAAGTAATTGTGCTGGGTTTTAAAAGG
15 TAGAGCTGGGGGCGCTAAGTGGTTAGTCAAGTCTACTTTTGAACCTCCTAAAATC
TGACGTCTCTCACCTGCCCTGGCAGAGTGCCATCAGGAGAATCTAGGAGACTCG
AGAAGCCACTTCACCTAACATCCTCATTGTGATCTCTCTAAGAAAGCTCGCTGAT
GACGCAGCCCCTGTGCTTCTCACACTCAACAGTAGCTGTGTTAGATGCACAGGTA
AAAAGGCTCATTTTCACCAGCCTCCAACCAAGGCATCTGCAGGGACACTTCAGCA
20 TGTCACCACACCAGACAGTGTTGCTGCCCTTGGCTCTCTGTGAGCATGCAGGCCC
AGAGATGCCAGATCCTCTGCAATTTTCAAGGAGTAGCCAAAAGTCCGGATCTTCATG
CTAATACTTCTGATTTTTTTTTTTTTTTTGTAGATAGAGTTTCGCTCTTGTCTCCAG
GCTGGAGTGCAATGGTGCGATCTGGGCTCACTGCAACCTCCGCCTCCTGGGTTCA
AGCGATTCTCTTGCCTTAGCCTCCTGAGTAGCTGGGATTACAGGCCTGTGCCACC
25 ACGCCCGGCTAATTTTGTGTTTTTCAGTAGAGATGGGGTTTCTCCATGTTGGTCAG
GCTGGTCTCGAATTCCCGACCTCAGGCGATCTACCCACCTCGGCCTCCGAAAGTG
CTGGGATTACAGGCGTGTTCCACCGTGCCCGGCCAATACTTCTGAATTTTTTAAGG
AGATAACTAAAACCTTCAAAAATGTTTTAAATTAATAAACAATATGGCCGGGCA
CGGTGGCTCATGCCTATAATCCCAGCACTCTGGGAGGCCGAGGTAGGTGGATCA
30 CTTGAGGTCAGGAGTTTGAGGCCAGCCTGGCCACCATGGCGAAACCCCTTCTCTA
CTAAAAATACAAAAATTAGCTGGGCACGGTGGCGGGCACCTGTAGTCCCAGCTA
CTCGGGAGGCTGAGGCACGAGAATCTCTTGAACCCAGGATTCGGAGGTTGCAGT
GAGCCGAGGTCACCCCACTGCACTCCAGCCTCCAGCCTGGGTGACACAGTGAGA
CTCCATCTCAAAAAAAAAATAAAAAATAAAAAATAAAAAAGAGAAACAGTAACAG
35 AAGCTACAACAAAACTAAACACCATGTAATAAACAATATCAGAGCCAAACCA
CATAGACCTGTGGGTCACGGCCATGGCCCACAGCTCTGGGGCTCCTCAGTTCTA
AGATTCTGCTCTCCAGCTCCCTCCCCTGCTCATCAGTGTTGTGACTCGTGCCCTG
GGTGACAGTCATGTCCGCTTTTGGAACTTACTTCCCCTATCTGCAAGAGGCAAG
TCACCCCTACCTTCTCCCCAGCTAAATGTGTCCCCAGGACTTCCCCAGTGAACC
40 AGCCCAGCACCTGGCCCCCTGGTACCTTGGAGATGGAGGCTGGGCAGTAAGAAA
GACGCTGGGCTGGGTGCGGTAGCTCACACCTGTAATCCCAGCACTTTTGAAGGCC
AAGGCGGATGGATTACCTGAGGTCAGGCATTTGAGACCAGCCTGGCTGACATGG
TGAAACCCCATCTCCACTAAAAAACAAAAAATTAGCCGGGCGTGGTGGCACAC
GCCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAGCCTGG
45 GAGGCAGAGGTTGCAGTGAGCCGAGATCGTGCCACTGCACTCCCGGCTGGCCAA
CAGAGTGTGACTCTGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAGATGCTGC
ACTCCTCTTTTCTTTGCTACTTTCCTCTCCTGGGTTTTTCTCTGCAGGCCACACTGC
TTTTAGAAGCCTTTCCTTCATCTACCACCGCTGAACATCACCGATGGCAGGCC
AGCACTCTCTCAGCTCTCTGGGTAAGACTCAGCTCTCTGGGCTAAGTCTGAGCTC

ATCTGCCAGCCTAGTGATCTTGCCAAGAGAGGAAGGAGCTGGATCTGATGTGAT
CTGAAC TTCGTCACCATACCGTCACAGCTGATGACCTAAGCTTCCTCCAAGTCGA
GGGATGGTGCAGCTCCATTGAAGTCTCCTCTTCTCCTCCAGGCTCTGCCCACCT
CACGAGAGCACATGGTCCTGACTGCAGTGACTGCAGGAAGACCTGGGATGGAGG
5 GCTCTGCTTTCTCACCATCCTCTTGGCCTGGCTTCTCTAACATGTTAAAACTTAC
AGTGGCCCACAACCTGTAATCCCAGGACTTTGGGAGGCGCAAGCAGGTGGATCAT
GAGGTCAGGAGTTTGAGACTAGCCTGACCAACATGGTGAAATCCCATCTCTACTG
AAAATACAAAAATTAGCCAGGCGTGATGGCACGCGCTTGTAATCCCAGCTACTC
AGAAGGCTGAGGCAGGAGAATTGCTTGAACCTCAGGAAGTGGAGGTTGCAGTGAG
10 CCGAGATTGTGCCACTGCATGGCAGCCTGGGCGACAGAGTGAGACTTCGTCTCA
AAACAAACATACAAACAAACAACAACAAAAAATCCCTCGCTTTTTTGCTGG
TATCTATAGTGCTTTTTTTGCTGGTATCTATAGCTTTTGTGAGACTCAGTTTATTTA
GCTTTAGCTTTCCTGATATTATTATTCTTACAAATTTTGCCTTGGGACACTCTTTCC
ATTCATTGATTGAGGCAATACTTATTGAGCACCTACTATTTGCCAAGCACTGGGA
15 AGCCATTGAGAATAAAACAGTGAAGAGTTAGAAAAGGTCTCTGATCTGATGGAG
GGCCTATTCTACTGGTGCTAACTGAACAAGTAATATGTGCTCTGAAGACATTAAA
ACAAGACAATGTGATGGGGGATGCTGAGAATCCAGTAGGAACTACTTAGATGG
GAAAATCAGGGAAGGTCCCTACAAAGGAGACATATATGCTGAAACCTCAATAAA
GAGAAGCAGCCAGCCATGCAAGGATATGGAGGGAGAGCAGTTATGGCAGAGGG
20 GTCAGCAAAGACAAAGGCCCTGAGGCAGGGAGGAGCTTAGCATGGAAGGGGAA
CCTGGGAGGCCGGCTGGCTGGACTTGAGTGAACATGGGGCTGAGATGAGATCAG
AGGAGAGCAGAGGCCAGATCCCCCGGGCTCCTAGGTCAGGGTGGGGCTGGTGCT
TAGGAGTTCTGAGGCTGACTCTGATTTAGTCTGAGGTCGGTGTCCCTCTCAATCC
CGACTCACTTGTGGTCCTCTATGGCCCGCAGGCTTGTTGAAAGTGCCCCACTTCCT
25 TCCTCACAGCAGCCTCTGTGCAATCCGAATTGCGCTGTGAATTTCCCTGCCACTC
AGGAGCCCCGGGGCAGGGCTTCACCCCTAGTTCAAGTTACCAGGAACCAATCTTTCT
CCACCTTCCTGCCCTAGCCCCACTGGGTCTGTCTCTGCATCTGTGAAATGGCTGA
GTGTGACCAAATGATGCAGGTAGCCTTTCCACTTCTTTCTACCCGTGGCGCCTCG
GGTGGAGGCGTGAGTGTGATTGGAAGAGGGTAAAGCAAAAGTGGAATCCTGGC
30 GAGAAATGAACTGAAAGAAAAAATTCCTCCTGGAATTTTTTGGCTCTAAGGAG
GCCAGCAGCGGGGGTTTGGGGTAGGAGGCAGAGGTAGAGAAGGAGGGAGGTTT
TTAGAAAGCTGACCGGGCAGGAGCCCTGTGACCCAGGCTTTCCTTCTCCTAAAC
ACCCAGTAGCGCCATGTGATGCAGGCAGGGGACTGCGGATAGGGCCTGTGAAAG
GGGAAGCGAGGGGAGCCCAGAGTTTCTCAAGAAGCCGAGAGAGGGACAGAGGC
35 TGAGCCTGGGGGGAGGGCTGCAGGGGACTGAGAGGGGAGTGTAGGCAGTGGGG
GTGAGGGGGACAGGGAGGAGGTGGAGAAGACGGCAAGGGGCAGCAGGGTGACT
GGGGCAGAGGGAGCCCCACCCACGCCAGGGCAGGCCAGGAGTCATAAGGA
GAGGGGACAACAGGAAGGGGCGACAAACGGGGAGGGGAAAGGGAGGCGGAGG
GGCAGCGAAGTGAAGCAGGGAGGGTTCGAGTGTGAACAAGAGTGCGAGGAAGG
40 GTCAAGGTGGAGGGAGGAGAGGGGAGAGTTAGGGAGAAACAGCTGCAGGAGAG
GCGCGGGGAGGAAGCCTTAGGGGTGGGGGAAGGGAGAGGGGAGTTGAGAATTA
GGGAGGAGGTGGTAGAGTCCGGGTAGTGAGCGGAGGGACAGGAAGGGTAGGGC
AAGAAAGGGAGAGGGGACAGGAGGGAAGGGTGGGCCAAAGCGGTGAGAAAGG
AGGGCCAGCCAGTTGGGTGGGGGAGAGGGCCGAGGCCCGGGGGCAGGAGTGCA
45 GGGCTCTGAGGCGGGGAGAGGAGAGGAGAGAAGAGCCGCGGGGGGCCCAGCCC
GGAGCCAGGATGCCCGCGCCGCGCGCCCGGGAGCAGCCCCGCGTGCCCGGGGAG
CGCCAGCCGCTGCTGCCTCGCGGTGCGCGGGGCCCTCGACGGTGGCGGCGGGCG
GCGGGCGCGGCCGTGCTGCTGGTGGAGATGCTGGAGCGCGCCGCTTCTTCGGC
GTCACCGCCAACCTCGTGCTGTACCTCAACAGCACCAACTTCAACTGGACCGGCG

AGCAGGCGACGCGCGCCGCGCTGGTATTCCTGGGCGCCTCCTACCTGCTGGCGCC
CGTGGGCGGCTGGCTGGCCGACGTGTACCTGGGCGGCTACCGCGCGGTTCGCGCTC
AGCCTGCTGCTCTACCTGGCCGCCTCGGGCCTGCTGCCCGCCACCGCCTTCCCCG
ACGGCCGCAGCTCCTTCTGCGGAGAGATGCCCCGCTCGCCGCTGGGACCTGCCTG
5 CCCCTCGGCCGGCTGCCCGCGCTCCTCGCCCAGCCCCTACTGCGCGCCCGTCTCTC
TACGCGGGCCTGCTGCTACTCGGCCTGGCCGCCAGCTCCGTCCGGAGCAACCTCA
CCTCCTTCGGTGCCGACCAGGTGAGTGGCAGGAGGCCTGCCCCGGCATACTCCGG
CGGGTGTGGAGGGAAGGAGGGCTGGCCCCCAGCGTGACCTGGGACAAACCAGGT
CCCCTGCCTGCACTAGTTTCCTGATTTGAAAGAAGAGGGGGGCTAGCCCTTGCAA
10 AACCGATGGCAACCGCAGTGGGAATAACCATGGTTGTTTTTTTGTGTTTATTT
TTTGAGACGGAGTTTCACTCTGTGCCCAGGCTGCAGTGCAATGGCGCGATCTCA
GCGCACTGCAACCTCAGCCTCCCGGGTTCAAGCGATTATCCCTCCTTAGCCTCCA
GAGTAGCTGGGATTACAGGGGCCTGCCACCACGCCCACTAATTTTTGTAATTTT
TTTTTTTTTAAGTAGAGGTGGGGTTTACCATTGTTGGTCTTGAACCTCCTGACCTC
15 AGGTGATCCACCTGCCTAGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCA
CCACGCCAGGCAGGTTGGTCTTTTTTGAGCTACTTGCAGGCCCTATGCTAAGCAC
TTTCACTGTTTAACTGATTTAATACTCTTACCACCCAGGAAGTAGGAATTATTAT
GCCCATTTTACAGAGAAAGACACTGAGAGGTTTCATGGCATTAACTAAGTGGCC
AAGGTGACATGGAGGGTTCGAGGAGCCGAGTAAAGGCAGCTGGACTCCAGGTCCC
20 ACCATGAACCTCCTCTCTGTGTGTTATGGGGATGTGCGGGCAGGGCAGGAGCAA
GCCAGCTTCTTCTACCAGCAGTGCTAGAGGCTGTCAGGCCGACTTGCTCAGATC
CCAGCTCTGCCTTTCCTAGCTGGAGCCACATGGGCAAGAACTCATTTATATCCT
GAATGGGCTGCCTGGTCTTCTCCCTTAGCTCAACCTCTGAGCCTTCTCCGTTCCC
CCTTGAACAGAGCATGGCACGTAGAAGAAATTTAATAAGTATTTGCTAAATGAA
25 TGAGTAAATGCCCAACAACACGGCTATATTTTGATAGCTGTTCCAGTGGGATAT
TAGACAATAATTTAGACTAAAATGTAATATTATTAATAAACCACATATGGTGTA
AATGAGCAAAAGCAGGAGGCAGGACTGCATACAGATAGGACTGCAGCCATGTG
GAAAGACGAGGTGTCAACGAAAGGAACTGGAAAAAGATTGTCACAGTGGTAT
GATCAGGCCACTGGACTAATTGCACTTCTTCTTGTCTCAGTTTATCAAATGTTCT
30 TTGATTGCACATATTATACTCATAAAGGGGACATTTTTCAAAGGATCGTTTCAT
CCAATTGGCACCCACAATTCAGCACCTAGCAGTTTCCAGTGTCCTTGACAAGGAG
TCACTTGTCCAGCTTGTTTAGGATCCTTTGATGATGACTTCATGCCCCCAGGCCAG
CCCTGGCCATCTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTT
TCTTTCTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTT
35 CCTTTCTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTT
CTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTT
TTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTT
TGCAGAGGTGCGATCTCAGATCACTGCAACCTCCACCTCCCGGGCTCAAGCAATT
CTCCCTGCCTCAGCCTCCCAAGTAGCTGGGATTATAGGTGCCCCGCTACCACGCTG
40 GCTAGTTTTTGTATTTTTTTAGGAGAGATGTGGTTTCGCCATGTTGGCCAGGCTGG
TCTTGACTCCTGACCTCAGGTGATCCACCTGCCTCAGCCTCCCAAAGTGCTGGGA
TTACAGGCGTGAGCCACTGCGACCGGCCAGCCCTGACCGTTTCTTACTTCTTGTT
GACATTCTTTCTGACCTAGAGACCCCAATATTTGTCAATGGGAATCTCTCATCTT
CCTTTAATCCTATTATTTTATTGACATCCCACTAGCACCCCAACCCAGTACCCTT
45 AACCTGTGTCATTGACCCTATTGACCTCCAGAGAGCCTCACCCATCTAGTACCCC
CTGTGGCAAACTGATCTTCTGGAGGCCAGGCCACTGAGCAGAGCCTCCCGTGG
CATCAACAGGGCCAGAAGCTCCTGTACGTTCTCCCTTGGCTGGGCACGAATTT
GGGTGGAGCAAAGGCAGGCCACAAGGCCTCATGAAGTCGGGACCTGATCCCTAG
GACAGTGCAGAAACACCAAAATGATTTGAGGCAGGAATGGACATCACTGGATTT

GAGCTCTTCAAAAATGGCTCCGGCTGCAGTGTAGACAGCATATGGGTTAACAAG
AGTGGGTACTTCACAACAGGCAGGAAGCGGCTGCAGAATTCAGGGGGGCAGTCA
GATGGGGATGTGGGGGTGGGTGGGACTGGCACCATCTGGCAACAGCTATACCCC
AGGAGCTGCGTGTTCACATACTTGCTGATTTAGAAAGGGCCATCCATCACTCT
5 CGACAAAGCATCTGCTCATTCTAAAAGAACTCATTTATATCCTGAATGGGCTGCC
TGGTCTTCCCCCTTAGAGTTACAATAGTCACATTCATTTACTTCCAATTAATAAAT
GGAAGTGGCTGCTTCTAATGGGACCTATTCAATTTTCTGCTTGAAAGTCTAGAGC
GAGAATTATCAGTGAGCTGATATGCCCCCTCCCTCCCCACTTCCAGGAGGACCCCG
CAGAATCTCCAATGGAATGCGGGTTTAAGTGCATCTGTGTGGACTATAATTTTAC
10 ATTTGAAAAAGGAAAAATAAATACTTGTCTTTTCCCCAATGCAACTACAGAAAGT
AAAGTTTGACAAAATCGCCCTAGCTAGTGGAATATAAATCTCTACTTGAAAGGC
AGTAATGGATCCTGAGATTTGCAGGGGCATGGAAAGGGTGACTGGTTTAGCAAT
GTAGAGAAGTATTTATTCTCTCCATTGAAATGGCCCCCTAGTCCTCACTGCTTTTTT
TTTAAATGCAGATGCCCAGGTCTGCCCCAGACCTGCTGAGTCAGAATCTGGGAC
15 CTGGGCCTGGGAGATTTGGAAGCAGCTAGTGCAGCTGACTGGAGCCAACAGACC
AGAAGGGGGCCTGGGGCCTGGCTGTTGCTGATTGATCCAAATTCTGGGTAAAGATT
TTCAGCCCATCTGCCCTTGCTGGGAGGCCTGAAAAAAAACGTTTTTTTACCAGG
CCAGAACTCACTCTTGGGGCTGTGCCTGGGACCACCTCTGCTGTATATCAGAGGG
ACAAAAGTGGGGTGAAAGGATGGGTACAGTAGGCTTCTCTGCTTGCCTCTCCGA
20 ACTGCAGAGGAAATTCTCGCTCAGACTTCTGTTCTTTCGGTAACATGCATACAAC
ATTTTAAATAATGTGCAATAAAACTGAGATCTTATTGGCTTTTTTCTGATTATAAA
AGTAATGAATAGGCCGGGCGCGATGGCTCACGCCTGTAATCCCAGAACTTTGGG
AGGCCGAGGCGAGCGGATCACGAGGTCAGGAGATCGAGACCATCCTGGCTAACA
AGGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGCCAGGTGTGGTGGCA
25 GGTGCCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATGGCATGAACC
CGGAAGGTGGAGCTTGCACTGAGCCGAGATTGTGCCACTGCACTCCAGCCTGGG
CAACAGAGCAAGACTGTCTCAAAAAAAAAAAAAATAATGAATAGTGTAGGTTGCTC
AGTGA AAAACAAAGGGATAAATCAACCAGAAATGAACAAGTGGCATCTGAGAC
ATCTGTTGTATGTGTTCTCTGCGACAATAAAAAAGCAGTGTGTGTATGGGTAT
30 GCAAAAGCAGCTGGGCCAAATGTCCTGATCTTTAGCAAGTGAATCCCAAGAGAA
GGATTCATTCACTCAGCAAAATATTTACTGAGCATCTGTTTGTGATCAGAGA
CTGGGAAAGTGTGCGAACGCCACCACCCACTGACCAAGAAGTGTCTCTGTAG
GAGGGAGGGGTATGGGTACAGAGAGTGCCCCGGACCCCTTTGGCCCTCACTGTC
ACCCCTTCCTGAATGGCAGGTGATGGATCTCGGCCGCGACGCCACCCGCCGCTTC
35 TTCAACTGGTTTTACTGGAGCATCAACCTGGGTGCTGTGCTGTGCTGCTGGTGG
TGGCGTTTATTCAGCAGAACATCAGCTTCCTGCTGGGCTACAGCATCCCTGTGGG
CTGTGTGGGCCTGGCATTTTTTCATCTTCTCTTTGCCACCCCGTCTTCATCACC
AGCCCCCGATGGGCAGCCAAGTGTCTCTATGCTTAAGCTCGCTCTCCAAAACCTG
CTGCCCCCAGCTGTGGCAACGACACTCGGCCAGGTAAGGAGGGGCTCTGGGTGC
40 AGGGAGCCTCCAAGCCTGGAGAAGCGCTGGATCGCTCCCGGGGAGGCATGGTCC
AGGTTGCAGACATTCTGGTTCAGCTACAGTGATAGCTTTTTATGATGATCTGCTCT
CCAGTGGGCCAGAGCTGCCCCTGTGACTGAGGATGGAGGTCAAGGTAGTGGTG
GTAGTGGTGGTGGTATTATTGGTTGCCATCTACGTACAGAATGTGTGAGGATGGG
GCTGGGGGCGGTGGCTATCCCTCTAATTCCAGCACTTTGGGAGGCTGAAGCTGGT
45 GGCTTGCTTGAGCCTGGGAGTTTCGAGACCAGCCTGGGCAACATGGTGAAACCTC
ATCTCTACAAAAAATAAAAAAATTAGTGGGGTGTGGTGGCCTGTGCCTGTGGTC
TCAGCTACTTGGGAGGCTGACATAGAAGGATCAATCGAGTCCAGGAGGTTGAGG
CTGGAGTGAGCCATGATGGTGCCACTGCACTCCAGCCTGGGTGACAGAACAGGA
AAAAAATAAAAAAAGAAAAATGAAAAAAAAGGAAGTGTGAGGATGATCAGGGT

CTTGACAGTGAAGATGGTAGTAAGGATAAGGATGATGGTGTGGTATCTACACT
GAAGACACAAACATTGGCAATGCGGAAGACAGTGGCATTAAAGGAGAGGATGA
TGGGGATGATGTTTCCAATGAAGGCTGTTAGGATAACAATGTAAATAATTCCACAT
TACCCTGTTACTAACCATCACAGCGTCTTAGGAAATCGGCCAAACTCGCTCCCTC
5 CTCATTAGCTGACATCCAAAGGAGGAAGGTTCTGAATGACCTTGCATAGGTCCCA
TGGCTTCCTTTTGCCCCTCGCCTTCCTAAATTAAGTGTCTACTTATGCCAAGCAAA
TCTGTCTCCAGACCTTGCAGCCAGTTACAGCTCTTGTCAATAGGATCTAAATGAA
AAAGGTGAAGAACATGCTTTCCCAGTCTGGCATATTGCTAGAGGTTTGTAAGTT
GTCAGGAGCCGAGAAGTGTGGTGGTTTTTCATTATCTATCGCTGCCTAACAAACCA
10 CACCAGAGCTTAGTGATTTAAATGACCTTTTTATCTCCTCTCCCAGTTCTGAGTGA
CTGGGCTCAGTCGGGCGCTTCTGCTTCTCGTGATGGCACTGGGGTTGCAGTCATT
TGGGACCTGGAAAGGGCTAGAACTTCTGAGTCTGCTCACTTACATGGCTGGCAGT
CAATGTGGGCTGTTGGCTGTGAGCTCAGATGGGACTGTGTGGACCAGAGCACCTT
GGTTCCCATTCGTGTGGTCTTACCATGTGGCTTGAACCTTCTCACAGCGTCGTATGA
15 GGGTTCCAAGAGGAGGGAGCTTTCCAAGAATGAATGTTCCGGGGAGGAAGAAAG
CAGAAGTTATGGGTCTTCTTAAGGTCCTTAAGAGGCGTTGAAGTCCCAGACCACC
ACTTCTGCTTCATTCTAACAGGTCAAAGCTGTCACAAGGCCAGCAGGGAAACAAT
GGCAGTGAAAGTAAACTCCACCTGTTGGTGGCAAAATGGCAGCACACGCTGGGA
AGGGTGGAGTTGACAGTGGCTGTCTTTGGAGATGACTACACTAATATTGTCCCTT
20 TTGGAATCTCAAAGGACAGTGCAAGGCTCTTGGACAAAAAGAGGTCAGAAAGCT
CTCAGGACAAAGGGCAAAGGGCAAAGGGTAAAGGCTGCAGCAGTGATTGATCA
ATCTTGTGCGCTACTGATATTCCCTCTACCCCCACCTCTCCACTCTCTATGCCTTGT
CATGGAGGGAGAGGGTTGCCATGTTGACTGTTGAGGAGGATGGACTTGAGACAG
CAAGGGGGGGGAATTTTGGTGTATCAAATCTGTGACAGCGTCTCTCTCTGAGTCA
25 GGCTTGACTGGGACTCCCCTGGTTCCCGTGGCAAATTGATGCTACGAGCCAAAA
AATCCCTTCAGACTGTTTTCCACAGTCTCTGGTCTTACTTCCCTCAGGACTCAGAG
GGGCCACAGCTCTAGAGCGGAATGAGTCTTGGCTAGGCACTTTTGCAGCAAAAG
AGAGGATAGAATAATATTGGCAGTAGTGGTGGCAACATTGAAAAAGAGTGATGG
TGATGTGAATGGAACTCCGTGGAGAGGACGATTTTGCTGACAGCAGTCACCTTA
30 CTAAAGGTGATGATAGTAAGGATGCTGGCCTTGGCGATGGTGGTGATGATGGCG
AAGGTGGTGCTAACAGCGGGGTGGAGGAGATGAGGGTACTGATTTTCAGAGACGT
GCTGATACTGGGAGGAGGATTAAATTAGGGGGTGATGGTAGAAGTGAAAACGTT
GGCTGAGGTGGTGGGGAAGATTATGGCTGCTGCGTTTGTTTGTTTGCTTGTTTTT
GAGAGGGAGTCTGGCTCTGTTGCCAGGCTGGAGTGCAGTGGCACAGTCTTGGCT
35 CACTGCAACATCCGTCTCCAGGTTCAAGCAATTCTCCTGTCTCAGCCTCCCAA
TAACTGGGACTACAGGTGCACGCCAAAACAGCCTGGCTAATTTTTGTATTTTAG
TAGGGACGGAGTTTCATCATCTTGGCCAGGCTGGTCTTGAACCTCCTGACCTCAGG
TGATCCACCCGCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATAAGCCACCAA
GCCAGCCTTGACTGTTGTTTTATCTGCTGCCTCTGGGGTCTCACAGAGACCGTCA
40 ATGTGCCCGCGTGCTGGCCGACGAGAGGTCTCCCCAGCCAGGGGCTTCCCCGCA
AGAGGACATCGCCAACCTTCCAGGTGCTGGTGAAGATCTTGCCCGTCATGGTGACC
CTGGTGCCCTACTGGATGGTCTACTTCCAGGTGAGCATACTGCCCTTTTTCTCTG
GGGGCCTGGCTCCCCACTACCATCTGAATGGCCTCATTTCTCATCACAGAGGCC
CAGGGCATGTGGAAAGGGGGAAAGTCTGGGAATAAAGTGAGGTGCTGCCCCGTA
45 CCAGCTAGCATGGGGCCTGGCACAAAGCCGTCTCAGCAATCCGACTCCCTCGGTG
GTACGGCAAGAGGAACCTCTGGAGACAGCTTCCTCCTGCTATACCTCCTGCGGGAG
TTGAATTACTGGGATGGCTTTGTGCCAGGCTAGGTCCTTGAATAAGTCACCTCAT
CTCTCTGGGCCTGTTTCCTCATGTGTACAATGGGTGGCTTAAACGAGAGGCTTTTC
CAGCTCTGCTGCATTGAGATTGTCCGACTTGGTAGCTGAGGCCTAGAGAGGGTGT

GTCAGTTGCCCAAGGCCCCACGGCAGGCAGGTCAGGGGCAAGCTCACAAAAGTG
AGTACTTTGCAACAGTGGTTCCCCAGCCTGGCTGTGCTTCAGAATCACCGGCAGA
GCTTTTAAAAATATGCTGTTTTTAAAAACAGATTCCAAGTCCAACCACAGGCTATT
GAATCAGAATTGCTGGGGAAGTTTCTAGTTTAAAGAACTTTTCAGATGATACAGA
5 TACTCAGAGTTGAGAACTATTGTCTTCCACTCACCATATTACTCCTCAGTGGGGA
GGTTAGTGATGTGTTTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGATAGGA
GGGTGGGCAGCAGCTTAATGCTAGCCCCCAGGCCATAAGGTCATTGCCTTCCATA
CCCCCTTCACAGGAACATTTGTTGGAGCTCCCAGCCTGCTACTTAGGGGACACACA
GTATTTCTATGATGAGATGGCGGCATGTGGTGGGAGGGTGTCCATGGCTGATTCT
10 CAGTCATACCAATCAGATACTGACTTCCTTCCATACCAGTTGGTAAATGGCTGCT
GCCCTGAGCAGTCCACATGCTCTCCCCTGCCCCAGCCCTTCCTGTGGGAGTCTCCT
GGATCCTACTCCATTATATAGCAACTAAAGGGGCAGTGCCTGGTATTGGAGGTG
GCCCTGGGCCCTGCTCCTGCAGCTGTGTCCAGAGCCATTCTGGCAAGTCCATGT
CTATGCAGTGCTTGTGTCAACCTGTGGACTCAGCTTGGCTTCAGTGTGAGATGAG
15 AACTCCCTGTGGGGGCAGCCATTATCTTTCCCATTTTCAGCAAACATTTATCCATGC
TTACCTGTGCTGGGGCCCTGGGGACACAAATACTAGTCAGACCAGCTGTGCCTGG
GCTCTGGGATAAGGCTGCACGCACTGCCTACAGGCCTGAGAGCAGAGCACAGGA
AGCTCCCTGCCCAGCCCAGCTACCTAGGAGAAAGGAGGGTGGGAAGGTGACTAT
CTCCCTGAGACTGGGAGAGGGGACAGCTGCCAGCTGTCCTGTGGTACGGCGCT
20 GAGGAATGCCACCTAGGAGTTGGGAGGGGGCATGGCCGTTTCTGTTCCAGCCTC
ACCCCTGTCTCTCTTGGCAGATGCAGTCCACCTATGTCCTGCAGGGTCTTCACCTC
CACATCCCAAACATTTTCCCAGCCAACCCGGCCAACATCTCTGTGGCCCTGAGAG
CCCAGGGCAGCAGCTACACGGTGAGAGATAAAGCATGTGTTCCGGCACCCAGTTC
AGCCAGGTAGCGGCTTCCTCTGAGAAGAGGAGGAAATGAAACTGCCTTCACACT
25 CCCCTTTCCTGCCTGCAAGGCAACCTCAGGATACAGGAAAAGCACCTGGAGGGT
GGGAGGACTTGTGTACAGCGCAGGGATCCTGCCAAGATGCTCAACTGCTTGAA
GGAATTCAGGCCAGCTGCACACCCCCATGCTGCTGCTCTGAAGCAGGTCTCGCTG
CCTAATTTGCACCCTCAGATCAAGCATACTTAGGTCCCTTTTCAACTCTTCCTTGT
CCCCTCTTTCTCTGGGACCCTTAGATACCTAGATCTCTGCCTTTCCAGAACTTTC
30 TAAACCAGTTCCTTGGCATTTCAGACTCATGAAATGAATGATCTGCAGAGCTGGC
AGATATATGAGAAATTTGCCATTGTAGTCCATTTCCCTTGGCCATGGCAGACATCA
CTAGTCAATCATGACTTTTTTTATGCTGAGCCCATAAATGTTCCATAATCAGCCAC
TACCAATTGATAAAAGTTAGAATACAAGAGGAACCTATTTGCCATCTCTACATAA
TCCCCTCCCTGGTTACACAGCTGAGGAGCATGAACTCCAGAGAGGGAAAGGAG
35 CTGGACCCAGGGTCACCCAGGGCCAGTCTAGAGTCCAGGTCTCCTGACTGCAGC
CAGGCTCCTTGCCTCTGCTAGCCTGCCTCTCCTGACTTCCTCCTGCCAGATCCC
GGAAGCCTGGCTCCTCCTGGCCAATGTTGTGGTGGTGTGATTCTGGTCCCTCTG
AAGGACCGCTTGATCGACCCTTTACTGCTGCGGTGCAAGCTGCTTCCCTCTGCTCT
GCAGAAGATGGCGCTGGGGATGTTCTTTGGTTTTACCTCCGTCATTGTGGCAGGT
40 GTGCAGAGGGGTGTGGGGCAGGGGGCTGAACTTTGGGCTTGGGGAAGTCTGCTT
CCACCATGGGCTGATGCTGAAGTGGTAGCCTGGACCAAGTTCAGCCTCTCCCAGT
GGGCGTCAGTGTGGCTTCCCAGAGGTGCAAGCTGAAAGAGACCCTCCTATCTAA
TCCAGCTGCCCCCTCATTTTGACAGAAGAAGAACTCAGGCCGAGAGAGGAACAA
ATATTTTCCCCCAGTGAATTATCAGCTCCTTGAAGGCAGAGATAGTTTTTCTTTTT
45 TTATTCAGTCTATGAACATGCACGTGGGCCCTCCATAAATGTGTTGAATGAATT
TTCCACTTAGTGGCAAATGAAGACTTAAAAAAAATTATCTTCCTTCTTCCATTTT
AAAAGGATCTGAAGCCATTTGTTACAAAGTGGGGGTGGTGGGGGCAGTGGGGG
GGATCAGCTAAAGAAGTCTTTCACACTGTTGCACAAACCTGAACCCTTTTTACTT
AGTAACTTTATGACCCTGAAGTTCCTTAGAGTCTCTGAGCTATGTCTTTAAATG

GGGACAGGTGTCATTCGGACCCTGAGCAGGGCTCTGCCCTTGTGGAACCTCAGTCT
GATGGGGGGTGTGTGTGAGGATTACAGCAGATGAAGTCTGTAAAGCACTCAGTAG
TGTGCCTGGATCACAAGTATGTGCTGGAGAAATGAAAGCTCCATAAACGGTATT
GTGTTGAAAGTGTGAAAACCCAACTAGATTTTATTCCAGCTATATCCTTAAAGCA
5 GTTTGTCCTATTTTATCCTCACAATAATCCTGGGAATGTTATTCCTGCTTCTTGAG
TAAGGGAACTGAGTCTAGAGAGGTAAAGTGATTTGCCCAAGGTCACACAGCTAG
CCAGGCTGGGAACCCAGGTCCCCCAACTCCATGTCCAATGTTTCATTCCACTAGAG
CACAGCTATCTCCCAAGCAACACAGGAGAAGGAGATAACATAGTTAAACTTGAA
AGCCAGGTTAGAAACACTACAGCAATACTTGACGTTGCAGTAGAGAAGTCATGT
10 GATATCATGGAAAGTAGGCCAGCTTTGAAACCAGACATAACCAGAGCTCAAATCC
AGCCCTGACTACTTATCAGCTGTGTGACTGTGGGCTAGTTGCTTAACTTTCTAGTT
AAGCACTTGAAAGTGCTAGTTATTTCACTTTCTTCCGCAGCAAGGATGCATGGTA
AATGCCTAGCACATAACAGGTTCTCCATTAATGAGAGTTGTTAGTGTTATTGAGT
GCAAAACTCAGCTTGGAGCTTCTAGCAGCCAAGACCAAAAGGGAGGAGTTGGTC
15 ACATCTTGGCCCCCTCCTCCACCCCCCAGTCCAGCATTCTTTTCCTTGCTGCTGC
TCAATCTTTGGCTGCTTCATGAGTACCCCATCCCCACCATGTACAAGCTCTTCTGT
GGGCTAAGCTGCCTGGGGTGGGCTGACTATAATCCCCCTCTGCTCCTCCACCAG
GAGTCCTGGAGATGGAGCGCTTACACTACATCCACCACAACGAGACCGTGTCCC
AGCAGATTGGGGAGGTCCTGTACAACGCGGCACCACTGTCCATCTGGTGGCAGA
20 TCCCTCAGTACCTGCTCATTGGGATCAGTGAGATCTTTGCCAGCATCCCAGGTAC
CCTGGATCCCCTCCCCTGCTCCTGCACCAGTGATGGGCTCTGCCCGGTGGCACCT
CAAAGTCAGGTACCCCAGGGATGCAGCCCCCAGGGCCCATCTGCATGGAGGAAG
GCAGTGTTTTCTGACCAGGGCTCATTACCCAACGGGGGTCTATAATTAGCACCT
GGTTCAAGTCAGCCCCTATGTGACAGGCACTGGGGATTTGGAGGCGAGCAAGAA
25 ACTTCCCACACCAGCTCTCCACGTATTCCCCTGGTGCCAGGTTCTCCACCCTCTGT
GTCTTTGAAGTTGCTGTTCCCTCTACCTTAGACTGAAGGTGAACTCCAATATCCCC
TTCAATTCTGAGCCTAAATACCAAGGTCCTTGGGCAGAAGGGGTCTCCTTCCC
GCCCCGTGTTTCATCTCTCTATCATAGCACACAGTACTCTGGGTCTAGTAATGGA
TTTCTATGTCTTCGCTCCCCACCCTCCCAACCCCCCTTCCCCGGGCTGGGAGCTAG
30 AGCTGCAAGGCTGGGGCAGGCCCTTCAGTCAGCAAAAAAGCAAGGGCTTCCTCA
GCTGCGGGCCCAGGGCTAGGCTGGGTGAGACATAAAGAAAAGACTGACCCTGGG
AGCTCACTCAGATGGGGAGAGAGTCAGGCAAACAGTGAGCCAGTGAGTGCTGT
GGAAGTCAGGGCAGAGTGCAGTGGGAGCCCTTAAGCATGGAGAGGAGGCGGGC
AGGTGAGTGGGTAGGAGGAGCGGTCTTACAGGCAGAGGGAACAGCATAAGCAA
35 AGACCCAAGCCTTTGGGAAGCGTGGGGGATAGGGCTGGAGAGGCATGGGAGGT
GCAGGGAGCCGAAGTGTGCAAGGGCTTTGTGCGCTGAGCCTGCACCTTGGGATTT
CTCCTGAAGGCAACAGCGCCCCTCCTCTCCAGGGGGTTTTGGCCGGGAAAGGAC
CCCATCCGAGGTCTTTAGACTGATGCTCCTGGCTGTGTGAGGAGGACAGGAGTC
AGGGGAGTTTAAGAGGCATTTGCAGAAAGTGACCAGGGCTGGGGTTGGACCCAG
40 GGCAGAGGGAATAGAGAGAAGGACATATATTTAGAATAGATTTAGAGGCTGTA
TCAAAACAATTTGACGATGACGTTGAAGGTGGGCAGAGAGGGTGGGGAGAGAG
AGGAGGTAAAGATGGTGCTGTCACTGAAATGATAGACCTGGCAGGAAGGGGAG
GAGGGGAGACAGAGCTATTGGGGCAGCGCATGGAGTACCCCGGTGCAGGGGTTC
AGCCAGGAGGCAGGTGAGCAGGGCAGAGGGGAAGGCGGCATTGATGCATGGGT
45 GCTGTCATTGCCACTGAGTGGACAGGCATCCAGGGGAAGCCTGGAGGGTGGCTT
GGTGGGGGCAGGGTCAGGGGCAGCAAGCAGGGGCCTGGGCCTGTTCTCTGCGCC
TGCACCAGCCCCTGAGATCGTCTCTGCTCCCCCTCTGCAGGCCTGGAGTTTGCCT
ACTCAGAGGCCCCGCGCTCCATGCAGGGCGCCATCATGGGCATCTTCTTCTGCCT
GTCGGGGGTGGGCTCACTGTTGGGCTCCAGCCTAGTGGCACTGCTGTCTTGCCC

GGGGGCTGGCTGCACTGCCCCAAGGACTTTGGTGAGTATGGGGCCTCCCCAGGA
GTGGGACATGGATGGAGGGAGGCTTGGAAGGAGGTGGCAACTGCTAAAGTGCT
TTGACTCTGGGGAGAAGCAAGTAGAGGGCTAGACTTGGGAGAATGGGGTTCTAG
CCCGGGCTTGGCCAGTCACCCACAGCGTGGCCTCCCTCCTTGGGGCCTTTCTTTCCC
5 CAAGTGTGAACTTAGTGGACCTCCAAGGCTCCTTTCTGCTTCTGGAAGTCTGCC
ATCTCTGGCTGAAGGGTTACCTTTCTCATGGTGTATATTTACGCCCCCTTCTG
AATAGCTGAAGAGGAATTGTAGACACCCCTGGAGATCTTCAGGAAGTCAAACAT
TAGTGGGTATCTGTCCAGTGTCTTCAGATCCCACCACTGCCCACATGGCCTCAGT
TGCCAGCCCCAGGGCTAGGACACGGCAGGCACAGGGCGCAAGACAGAGGATCC
10 CTGTCCTGACCCAAATCTAACCCTCCTTTCCCCAGGGAACATCAACAATTGCCG
GATGGACCTCTACTTCTTCTGCTGGCTGGCATTACAGGCCGTCACGGCTCTCCTAT
TTGTCTGGATCGCTGGACGCTATGAGAGGGCGTCCCAGGGCCCAGCCTCCCACAG
CCGTTTCAGCAGGGACAGGGGCTGAACAGGCCCTATTCCAGCCCCCTTGCTTCAC
TCTACCGGACAGACGGCAGCAGTCCCAGCTCTGGTTTCCTTCTCGGTTTATTCTGT
15 TAGAATGAAATGGTTCCCATAAATAAGGGGCATGAGCCCTTCCTCACGACCATG
GTCCATGACAAGGGGCAGGGCAGAGGGGGCCTGGATGGGAGTCCTTGTGGGGGA
CCAGGCAGGGGACTTGATCAACAAGCACCAGACGAGTGGCGGGGGCAGGCGA
GAGGCTCAGTGGGACCTCCACCCTCGTTGCCCCAGCTGGTGGCTGACCAGGTGGC
TGTGGAGGGTCAGGAGCTGCCCCGGATCCTCTCCATGTAGTTGCGAAGCTCCTCA
20 GGGTCCTTCAGCCCCATGTCCTCACACACCCAGCGGATGTCCTCCTCGCCTGCCA
CAAGGATGGACTGCACAGCAGGGGGCCCCTACAGGCTCCTCAGGTGACTGGGCTG
GAGGGGCTGGCGCAAATGTCACAACTCTACTCGCTTCCGCCGCCCCCAGCCTC
CTTTCGGGCCAGGGTGCTTGAGGAGCTGGTGGTGCCCCCAGGAGGGCCAGGGGC
CAGGGTAGGGGCCTCCCCTCCTCCCCACTCTCACAGGGGCAGCTCCCCTCCCC
25 TTGGGCGGGCCAGGGGACTGCCGGTCCAGCTGGCGGCTCAGTTCCTCCTGGTCAG
TGCCAGCCAGACCCAGTTGTGGGGCTGGGGGGAGGTGGGGTTCAGTGGCACTGT
CGGGAGGTTCTTTGCGCTGATAGCGCAGGACGAAGACCACACCATTGACCAAGA
AGATGAAGATGGCCACGCAGAAGACTCCCAGCAGGGCGTACATGCCAGCTCTA
GCTCAGTGACATGCTGAGGGGCAGGGACCATCTCCTCCTCCTCTTCTCCTCCTCC
30 TCCCTGGCTTCGGTCTCCTCCTTCCCTGGCCTCCTCCTCTGCCCGCTCAAACCTGCC
CCTCACACCTGTGTTGCCCCGACACTGCCTGCCACCTGCCGTTTACCACCCATG
GTGGCTTCTGTGGCTGGTGGGCTCCAAGCAGGGCTGGATGGGAGAGCAGGGGCT
GGAGTGGAGGCAGGGGGCAGCCCCAGCCAGGCGGTGCCAGAGGCCAGAGGCAC
ACGGTGGCGGCCCCGGCGGCAGGGCTCGGGCGGGTGCAGAGCCACATGCAGCGG
35 CAGCCCCCTCGGCGCCTGCCCCACTCACCACCACCCGAGCTGGGCACCCTGCTCC
TCAGCTGGCAGGATGGCACCAGGCTCCTCGGCTGAGACGGACAGTCCCAGGTCA
CGGCGGTCTGATAGAGCTCAGCTGGGGCCACAGTGTGATCAGAGAAGGACAGCCAT
AGGGAGAGGGCCACCTCCTGTGGGGCACACAGACACAGGCAGAGACATGCGAG
GGCACGCACGCATGCACAGAGAAACCACTCCACAGAGATAGGCCACATGGAGG
40 AGAGACCAGAGAGAAAACAGAGACACAGGCAGATAGACAAAACACAGGGAGA
GAGGGGACGCGTGTCAATCACCTGTCTGCCACTCAGCCCTAGGGTCTGAGTTATT
GGGAGGGTCTCAGTTAGAGCCATCTAACCAACCTCCCCTGCCATACTCCAGCC
ACTGCTTGATCACCTCCAGCTGCAGAGAGCTCACTACCTCACAGAGTCAGTCCTC
ACTCTGAAAACCTTAAGGGGTGAGGTACCAGGGTCCCTTCTCCTCCCATTCCTCCTC
45 TACCATGAGCCCCCATCTGGAGATGTTGACCTCATCCCCCTGACCCCCCACTGT
CACCTGCTTTGGGGCGGGAAGGGCTGACTGTGCCAGCACGTAGCTGTGACCTCC
CCGGGGTGGGCAGTGCCCCGGCTCAAGGTCAGCGAGATGCCCATCACTGGCTGC
ACCCTCAGCTCCAGCACTGAGACCTTGTCTCGTCCGTACAGCCAGCGCCTGCTCCC
CCAGGATGGAGTCAGACAGTGGGGAACGCACCTGAGGGTGGAAAGGAGCTGGA

GGTGGGGGGCCTTCCATACAGACAGCCCCACCCAGAGGGAACCGGGTGCTCCC
AGCACCTCAGGGGCTGCCCTCCGGAGGTGGGGGAGGTCTTCGCCACGGACAGC
CCCCACCCAGAGGGAACCGGGTACTCCAGCAGGCTCATGGGCTACTATCCCTCT
ACTCTTTGCACCCCGGTGCATACCTGGACCCCAATCCCACACCTAGGGGGCAGTT
5 CCCTTTTCCCTCAAGACCCGGTCCCCACACTACCCACACCTCAGCCCTTCATAGCT
AGAGGGCTTCCCCCCTTATGCGGCCACCCATTCTGAGCCTATCCCCAATCCAC
TGCACTCAGACCTAGACCGCACAACTCCCCACACACTCTGGGCTCCTGGCACAC
TCTTCACTCCCACCCACGAACATTTTGGGGGGCCCCTCCACCCTTCTCAGGGGGTCT
10 ACTCTCCTGGTCCCCAGCTGCTTACCTCAATGGAGGTGACACCGGGCTCCCGGCC
CACCACGACACGGCCACCCTCCAGAGAGGCTACACGCGAGTCCAGCACGCGGGC
GTGTGGCGCCACGAGGTGGGACACGTCTAGCAGCCAGTCGGGGCCAAGCAGGTG
CGTGAGGCGGGCGGCCGCGTCCAGCGGGTGGGCGCGAAGGGGGCGAGGAAGC
GCACACCGGCCCGCTGGTACTGCAGGTGGCAGCCACGGGCGCGCCGCTCGGCCT
CATCCGACGCCTCTGCAGCGGGTTCCGCAGGCCTGCAGGGCGGGGAGGCCGGGA
15 CTGGCCGTGAGCGCTGAGCGGCCCCAGCCTGCCAGGGCCCAGCTGCTGGAGAC
CCGCAGCTCGTCCCCGGCGGCTCCTAATCACCAGCAGCTCCTGTTTCTCAAACGC
AGACATCCGCCCCCTCTTGGGGTTCAGGCCCTTCCACCTGCAGGCGAGCCGCCCCAG
CCCACTCCCGACTGGCGCTGTGCCTCGATACCGCTCTTGCTCCCAAGTGGACCG
CAGGGGAGACGCTCTCTTACGGGGACCCTGGGGGCGCTCACTCTCTGAAGGGCC
20 TGGAAGCTAGATTCCAGAGGCGTGGGCCACCTCTCCCTGGGTTTTGGGGAGCCCC
CTCCGAGGGTGTTCATTTCTGAGCTCTGTGTCTATCTTAGGCTCTGAGGGTACGA
CCAGCATAGACAGACCGCAGCTTCAAGGGGCTGACATTCTCGGGGGAGGAGCGT
GGAAAGGATGGACAGGCAACATTAACCAGTACTGACGTAGATTAGGAAGTGGAG
GGTGCTACGGGAGAAGTGAGGCAGGGAAGGAGGAGAGGGATGCGGAAGTCAGC
25 AATTTACAGAAAGCGATCATTGGCTGGGCGGCCAGGGTGGAGGTGGGCAGAA
GGAAGTCAAGCAACAGGGCAGTTTTTCTGACCCCGACTTGGGCCCATGGCTGTG
TCCCCTGCGCCCTCTCCGTCCCAGTGTGACTCGCCAAGGCCTGCCAGCTTCCTCA
GGCCTCCACTCACCTTCAGCAGGGCCAGGTACCCTCCAGCCGCGGACCTGCTCG
AGGGTGGTGTGCGGTGAGCTCGATACGCAGCGGTAGCAGGGGGGCCACACGGTC
30 AGCCGCAGCGAGGCGCGGAGCCGGCGCCACCAGAAGTCCACTCGCACCCCCCGG
GCGCCCCGGCTCTCCTTGCCAGCCACGAACACGGCATCACAGGCCTCAGACACCT
ATGGAAGGGCAGAGGGCAGGTGGGCGGGCTAAGCCACTAAAGACAGGTGTGAG
GCTGGGCCGGGTGGGTGGCTCATGCCTGTAGTCCCAGCACTCTGAGAGGCCGAG
GTGGGTGGATCGCTTGAGTCCAGGAGTTTGAGACCAGCCTGGGCAACATGGCAA
35 AACTCCCTCTCTACAAAAATAACAATAAATCAGCCGGGTGTGGTGGCACATGCCT
GTAGTCCTAGCTACTGGGGAGGCTGAGGTGGGAGGATCCCTTGAGCCTGGGTAG
CTGAGACTGCAGTGAGCCGGAAGTGTACCATTGCACTCCAGCCTGGGGACAGAGT
GAGACTCTGTTTCAAAATAAATAGATTAAAAAAGGCATGGGCCAGA
AGAGAGCAGCCCTGACCTCAGGCCGTAGGACGGGCTCCCACTGAGTTCAGCTCT
40 GTGTGTCACTGGAATGCATGTTGCAGCAGGATTGTTGGTTAAGCCCCTGTTCTTT
GTTTAAGATTTTACTGTAGGGGCCATTCCCTGAGGTTCCCTGGGGCTCAGTCAGG
GGAAGTGGCCATTGCATACCAGTCTTCCTCCTGGCAGAGCAGGGGTGTGAACCCA
AACTTTGGCTCCTTATTCATGCTGGCCTTTGACATTGCTCTTGAGGCCACCTGGC
AACCAGCTACAGCCAGGTAGGCAGAGGTGGGACAAAGCAGATCTCCACCAAGG
45 CCCTCCAGCAGGAACCACACACATTTGAGCAAAGGACCACAAGTGGGGAAAGGC
ACCTTCCCCCTTCAGGTGGCTGGGATTTGCATACATGCAGACTCCATGCTTCCCCT
CTTAGAACTTCAAGATAGAGGAAGTTGCTCTACCACCCTCCCTTTTATTTCACTTC
ACAATCACCGGTAATAATAATAATAAATTTTACCATTGTATAATTATTACAT
CATATTATAACAGCAATAAAGTGCATTGTTTACAGCCCCTGCTATCTGCTAAATACT

GTCTTAAAGTGCTTTTAATTCTTACAACAACCCGAAGATATGTTCTCATTTTAAAG
TTTAGGTAACGAGGCTCAGAGAGGTTAAGAGACCAGCCCATGATCACAAAGCTG
GTTGACAACAAAGATGTGTTTCAAACATAAACTTTCTGATCCCAGAGTATGTGCT
CTCGACTCTCTCAGGCCAGCGCACTTGCCAGTGCAATAATGAGCGTGAAAGTGTC
5 TAAGGTCGGGGGGCTGTTAGGGTTACTTGACTCGGGAGAGAGGTGGCTGGAACA
AAAGAAGTTGAAGCTGTGGTTCCTCCCATGAGGTTTCTCGTCTCAAGAAGAAGCT
GTTCTCTTGGGGACCCACATGAGGAAGGAGGAAAGGTGTGTGTGCGTAACTGTG
CCCACACAAATGCAGACTCACATGAGCTGGGCACCTGCCACTCACCTGCAGGAC
CTGTGTGTTGGCAGACTCGCAGCCGACATGCTCTGTACCTCCACCAAGGCCCCC
10 CCGCCGTCCACAGTGACAAGGCGCACGGGGACATGCTGGGGCACTCCAGTCAGT
GGTGCTGTATTCACCAGCTCCTCAGCCTGGGGGTGGAGGAGGGGGCTCAGCCCCA
GGCCCCCTCAGCTCATGGGGCTCCTGGGACTTGGCCTCCAGCCTTCCCAGGCAGAG
ATGGAGGTCTCCTTACCTTGGCCAGTGGGATAAGGGCTCTGATGTCCCGCTCAGA
CACCAGGATTTCCACACCATTTTGTCTTCTCTGCTTCAGGGGCCTGGCCTGGGT
15 ACTCCAGCTGCCACGTGACGGGGCGAGTGACCGCTACGCCCCCACCAGTGCTATT
CTCCACCACAAAGTCCACCCATAGGAACCTCAGACAGTTCAAGGGGACTGCTGGC
CAAAGGAGACAGAGAAGCCAAATGCTTGCTAGCTGCCAGGCATGGCCTCAGCAC
TTCCTGCATTTCATGATTATCCCCATTTTACACAGGAGGAACTGAGGCACAGAGG
TTACATAGCTCACTTAAGACCACACAGCAAAAAGTAGCGGGGCTGGGATCTAAA
20 CCAAGCATCCTCGCTCTAGACCCCCAACTCTGACCCACTCTTGGCCTCTCTAAG
ATCCATGAAGCCATTTAACCACCTCCCACCTGGCAAGGTGGCTCACTCCCCTGCC
TGCCCGGGCCCGCTTCCCCCAGACTTCCGCTTTCCACAGCCACTGAGGTGGCATG
CGGGAGATTCACTTCCAGGTCCCAGGACCAGACACTTGACCCTCTGAATGATAAG
CTTCCTTTGATCAAACAAAACCTATGTGCTGGGAACCGTCCTGGGTGCCTGATA
25 TGTAGCACTGTATTTTATTTTCAAAAATGCTAAGGGATGCATTATTATTCCTATTT
CACAAGTGAAGAACTGAGGCTTGGGTAGGGGAATGTAACTGGCTTGCCCAAG
GTTTTGCCCATCCCAAAGCATCAGAACCAGAATTCGAACTGGGGCTACTGAGTC
CATGGCCTTGACCCAGGCTCAGGGCATGAATAAGAAGAGTTCACAACCGCAGAA
CTGCAGCTGGGCTTTTTGGGGGAATGTGAACGGGCCAGAGAAAGGATCATTGG
30 TGGAAGCAGGGGGATGGAGTAGTGGCTATGAGGGCTCTACCTGGGGCACAGGAT
TGGTTGGCATCTCTTAGAATAAGACTCACAGACACTTGCTATGCCTGGCACATGG
CTGGGGCTGGGAAGATAGTGGCCGAATGAATGAATGAAGGAATGGATTATGCCT
GCTTTGTGCTGCTTCCTTGAAAAATCTGTCTTGGGTCTGCTCACCTGGGGATCT
AGAGGCAGCATGGCAGCCTCCAAATCTGCTCAACTGCACTCTATAACCAGCCCTC
35 CCTCCTTTGCCCCCTGGGTGGAGGGAACTGCCCACCTGGAATCTGGCTCTGTGA
GCCCAGCACGGTGGCAGGTGATGAGGGTGGTGTGGTGCCTGGAGCCCTTGAAGC
GGTCCAGCTTGGCAGTCCAGAGTGTGGGCTGGGCTGGGCGGGCGGCTGTCACAT
GCAGCCCCTTCTTCACCTTGATCCTGGGGAAGAGAGTATAGGCTCAGTTTGGCAA
GGTGCATGCTGAACTGTGGGCTGGATTGAAGGGGAAAGACAAGGAGCCAAAGCC
40 ATCTGACCTCCCTGGCTCCAGTCTGAATCTCCTCTTCACCATCCTCCAACCCAGAA
GGACCCCGCCTCAGTGCAGCTCACACCTTACAGCTCTCCCCACCCAAAGACCAC
TTACGCCTCCCCACTGCCATAAGGTCAAAGCTTAGCCGGGCATTTGGGGGCCCT
CCAGGGTCTGGTCCAGCCTTAACCTCGGTTGTGACATCTCTCCATGCACTCTCTGC
TTCAGCTACACACAAGTTTCCCACACACACGGCACCCATTTCGTGACTCCAAGCCT
45 TTGCCCAGTCTGTGCCTTACGCCTGCTCTGCCCTTTCTTACTTTACCTGCTGATGCT
TTAAGCCTCCAACAACCTCACAGACCATTTCCTTTAGAAAGCTTTTCCAGTGGTGG
GATGAATTTCCCCCTTACTGCACCCACTCACCTGAGCTCCCACCGCACTTTGAAC
CTCCCTCAGTGCTTACACACCCACATGCCTTCTAATCCAATTCATGCCCATCCAGC
TCCCTTCCCTACCACTGGGGGCCCTTTCTGCCAGATAGGGACTGGCCCTTGCTC

GTGTTTGGATCTGCAGAGTGAAGACACAGGGCTTGGCAGGCTGTAAGTGTCTAG
GAAAGATCTGCTTAATAAGAGTGAGCATAGGAGGGCGTAGGAGATGGGGAGAC
ACAGAGACGGGACATGCACAAACCCAGGCAGGGCTTGAAACTAGGTCTAGGTTT
CAAAGCATGTCCACAGACCGCTCTTCGATCCTCAGGAAAGATATCATTACAAAGT
5 GAGCAAGTCCCAGTGCCTCACCTAACCAAGCCCAGGACTATCCTGCCTAGAACT
CAGGCTTCTCAGAATCTTAAAGCCTAAGAGATGCCTCTCCCATGGATTCTGCGC
TGGACTCCAGAAGCAAGTCATACTCTGCAAGCCCTTGCCGGGTGAACTGGGTAG
GTGGGTGGGGGCTGCTTTGGGGGAACTTATTACGGAAAAGGACACAAAGAATCA
GGGCCTTCCTATGGGGAAGAGCAAGCTCTGTCCAAAGGCTAGACTCCTACGGCG
10 AGGGTGGCAAGGAGGGACAGCATGTAGGTGAACGTGATTGGGGCAAATATCCCT
CTCTGGAGCACTGGAGCAAGAGCTCACACTTAGGTACTGCAGTCTCTAAGCCCTT
TGCGGGTTCCCTCCCTGGAGACTTGCAGCTGCCCTGAAGGTGGACCGTTAGCCC
CATTGGACAAAGGAATCTCAGGGAGGTGCCAGGGGAAGGGGCAGCTTCCTACTT
CTGACTCTAATTCCAGGGCTGTGCCCATGGTGGGCTCCTACCAGCACAGTCATGG
15 CTTTTTACCTGGAAGGAGTTTAGTTTGGTGGACACATGTTTTGCAGAGGTCAAGG
ATTCCAGCAAGGACCCCAGGAGGAGCAGGTACCTGTCCCTAGTCTTCCCACAGA
GGTTCCCACCCTCACCCATCCCCGTGGCCTGGTGCTCACCGCAGGGTCAGGAGGC
TGGCTGTGAAGTTGTGCCGAAGCAGGAGGGTAGCACTAAAGAGCTGGCCGGGGCC
GCACTGGCATGTCAGGCACCCGCAGAGTCACAGCCTCGTCCAGAGGTACCTCCTG
20 GTACTGCGGGGGGTCTGCTGGGCGCAGCTCCACACCCCCCACTGGGAGGGCCTG
CTCCCCAGGGTCGTTCTCCTCGCCGGAGCCACAGCCCCAGGGCCCTCAGCTGCA
GGCTCAAGCGTGTAGGCCAGCTCGGCCCGTGTGGTGGAGGCCTGTGAGAACCAG
TGCGAGGGAAGCTCCAGCTCCACCACGCAGGCGCCCAGGGATGGCTGTGAAGAC
ACGACAGCAGTAATTGGCATGGGGGTGGGTGCAGGGCGAGGAACAGGATTCTCA
25 GCACCCATGGCAGGAAACCCAGAGCTGGAGGGGGCTCATGAAAGGGAGGCCCAG
CATGGGCCGGGAGACACAGCCTGAGTGACACAGCAAACCAGCAACCTGGCTGGGG
CTTCAAACCAGGTCTAGGTTTCAGAGCATGTCCGCAGACCACTCTTCAGCCCTTG
GGATAGGTCTCATTACAAAGTAAGCCAATCCCAGGGCCTTACCCTAACCAAGCCC
AGGACTATCCTGCCTAGAATCCAGTCTTCTTCTCAGAATCCTAAAGCTCAAGAGA
30 CGCCTCTCCCATGGATTCTGTGCTAGACTCCAAAATAGTGGAAATAGCAATTAT
AAAAGTAACACTACTAATAATGCAAACACACTGGCTGATTGATTACTCTGCCGTA
AGCTATCCTTACATTCATCTCACTTGTTCTTACTCCAACCTCAGATGGGGTAGGA
ATTCTTAACACCCCATTCTTCAGATGAGGAACTGAATCTCAGAGAGATTAAAGTT
ACTTACTCAAAGTCACACACCAAGGACTGAACTCCCTCTGGGGCCCTAAATAACC
35 TTTTCACAGCACTGAAAGCTAGTGGGGGCAGAAATGGAGTCGGGTGGTCCACAA
CCCCCGCGCTTCCCAGGAGTGGGGGTTTCTCTCTGCCGCGGGCCCACCACCTGG
CTGATGCAGCTGCAGCAGGACCAGCCTAGGTGGGGCCTGTCTACTCACCTGGAA
GCGGCAGGCTTGGTGAGCAGTGCCGGCAGGGTGTGTGGCATGGAGCCGGGCACA
GGGCAGGCTGCCAGACCCTGGTGGCCAATCCTGCCCTTTGAGGTGGAAGAGAAC
40 CCGGGCGTAGGGCTCTGCTGGAGTCACAGCCGCTTCCACTGAAACGGCCCCGCAC
GTCCCATGGGACTGGCCGTTGGTGGGGCTCAGTGACTCGAGGGGGGACCACCTG
GAGGGAGAATGAGAGGGCTTAACAAAAGAGGAGCTTGGGAGGGGAAGATCTAG
GAAGATGGGATCCCAGCTTGGCAGAAGAGAACCTTTATGGGCCTCAGTTTCCCCC
TCTGGAATATGGGGAGCACAGCCGGGGCTGGGGAAGGCTCCCAATTTGTACCCA
45 GCAGACCTCAGGCCCTGAGTCCTGTTAGCCTGAGAGTCCCCGGTGCCCCCTCCTT
ACCTGCTGAGTGGCAAAAGGTGGGTAGGAGGCCCGGAGAAGTGGCTGGGGCCCTG
GGCCAGGGCTGTAGGAGCAGAAAGGTCTCAGATCGGGAGCTCAGAGAGGAGTTG
GCAGGTGGGTAGTGGCCACCTGCTGCACACGGAAGTGTTACGGGGCGTCTAGG
AGCTCCAGGGCTGCCGGCAGGTAGACAGGGTCCAGGGGAGCCTGGCCACAGTCC

ACTGAAGAGGCATAAGAGGGAGAGATGATGACAGCTCCAGAGCTGGCAGGGGC
TGACCCGGGTGCCATGCTGGGGCACAGTAGTTGTGGGCAAGGGAGGGAGAAAAG
GGCTGTAAATGTCCCTTCCCTCTCACCACCATTTACAGATGAGGTCCTGAGG
CTTAAAGAGCCTCACACAGGTAGTATGTAGCAAAGCCAGGATTCGAATCTGAGT
5 CCAGGACTGGATGCTTCCCAGCTATTCTTCTACTTTCCACAGACCTTGGCCTTCT
TCTCGCCAACAGCCTTCTCAATGTCTCCTTTTCCCCAACTCCTGCCCTCCATCTAC
TCGCCTCTGATACCAAGGCACTTCTGGGGTGCAACCGTCGGCAGACTGGGCCAGT
GTAGTAAAATATGGTAATGAAGTGAGCTTTCTCTGCCCTGAATCCTTGGCCAGGC
TCTGCTGGGCATCCACCCCTCCTCCCCCATCATTGCCATGGCAACCTGCACCATCT
10 TTCCAAGCTTGCTCCCTTCTTCCCTGAACCGACTGGTATCGAGTGCAAGTGTGGG
ATGGGCGGGCGCGGAAGGTGCTGAAGAGGTCTGTGAAGGCACTTGCTTGCCCTG
GGGGTGGGGTGGGGACCAGGAGCCTGGGGAAGACAGTCAAAATAGTCAATCATC
AGAAGGACAAAGGAGCACTAAGCCATATTGGTTTGCTCTAACTATGAGCACTAA
TAATAATAATTAGCATTTTGTGAATGCTATATGCAGGTGAGAATTTAAATACTGT
15 ATGTATATGAACCTCTTTGAGTCTTTGTAAATAATTCTGTGAACCAGGTTCTATTATG
ATGAATCCCATTTTGTGGATGTAGAAAATGAGGCCGAGAGGTTAAGGTATTTGCC
TGTGGTTCCACAGCTGGAGAGTGAAGGAGCTGGGGGTGATCCCAGGTATTAGC
CACTAGACCATCCGGCGTCTCCACCTGCCACTTCTCTCTCCACTCTCCACTGCCAC
GGTGCACCCTGCAGGCTTCATGCCCTGGAGCGCACCTCCTCTCCTCTGCTCTGCCC
20 GGTGGCACCTCCCTCCTCATTAGGGCCATGAGTGAATACTGCCTCCTTCTGAAG
GAAGCCCTCCTTGGTTACTCACCTTCCCACCAGTCTCCTGTCTTTTGCAACCCTGG
GTGCCTCCTCTGAATTAGTAATCTTCCTATAAACAAGGGACCCTGTCTTGCTCATC
CTGGAATTCCCCCAAAGTGAAGCGCTCCCTAGAGAGGATTTCTTGGGAGCCTG
GAGACCTGAATTTAAATTGATGAACTTGGGTGAGGCATTAACATTTTGAAGCCT
25 GTTTCCTCACTTGTAAGGGGAGGAGCATTAGGTGGCACTGTGGACAGGACA
GGGCTGTGTAACTGTGGAGTGTCTGTCTGGAGGGAGCAGGCATTATTGCTGCTGC
ATAATGGATTTGACAAGGTTTTCTCCTCTCTCTATTAGGACTCCCATGGCGTCCC
TCGGGATGGGGAGCAGGTGGCTGAAAGCAACCCACAGCTAGCTCCCTCTCAGC
CCCACAGCTGGACTGTGGGTGGGGGTGGGGGAATTGGTTTCAACCTCCTTCCCTGG
30 CCTCCCCACCAAGGAGCATATGACTGACAGGCTCTCCCTGCCCCCTGCCCCAAG
CGTAACAAGTGACCACTGCTCTCTGGGGGAGCCACTGGCTTCAGGTTGCGCTCC
TACTCCATTGCCTCCATAATTACAAGATGCTCTTAGCCTGACTCCACGGACTCCC
ATCACCCAGCGCTCGGCTCTCTCGGTGGGGAGGGCAGAGAATGTTTCACTGTCCC
TCTGTCTTCTGTGGCATCCTTTGCCTTGCAGCCACAGCCCAGCTAGCCCAGGCCA
35 AGGGAGTCCGACCCCCACCCGAAGCACAGGGAAGTTGCTGCCCTTTCCCGCAG
TGACAGGAATCCTCTCAAAGGTTCTGGAAGGCAAGGATGCGGCCATCCCTGGAG
ACGCCAAGGTCAGGGAGCCCTGGGGGAAGGGGGAGGGAGGGCTTGCGTCTGTTG
CAGGTCCCAGGCAAAGGGGCTGCTTTCCACTCCCGAGGGGGGTGGGTGTTGGTGGC
GGCGGAAGGAGGCTAGGAGGGTGCAGCGCTACAGACCACAGTGAGGGAGTGGG
40 GATGACGCTAGTGCGCCCGGACCGGGGCCCGGGTTCGATGCCCGGGCTGAG
GGGTCCCTCGCAGAAGGTGCGGGACGGGGAAGCCCCTGCGCCGGGCTGCCCCGG
GTCAGGAAGGAGTTGCCGGGTCTGTGAAGGTGAAGGAAGCCTTAGGGGCGAGTG
GCTGGGGGCAGGTTCCCGAGGGCAAGAACTCTCCGACCTTCAGGGCGCTGCGGG
GCGACCCCGCTCAGGGTTCAGTCCGAGAACCCAAAGGTTGGTGGCTCCCGGGCA
45 TCACTCGCTCCCACTCGGCCGGGCCCCGGCCGCCCTCGCCCCGGCCCTCCCTCC
CGCTGACCTCTCACGACGTCCAGGGCGAGGGCCACCAGGAGGCAGAGCCAGGGG
CCGTAGGGCCCCCGAGGGGCCGCTGTTGTGCGACCGGCCATCCGCGCGCACATC
CTTCCCACAGAAGGCGGGGACGAGGCGGGCGGCTCAGGTGGCCCCAGTCCCGCA
CGGCATCTCCCGCACCCGCTCCGCGCCGTCCCCACCTGGCCCGCTGGGTCCCGGC

CGCCGCCGCGCCGCGCCGCCGCCGCCGCCGCCGCCGGCTGCAATTCCCAGACAATGGAG
CGGGAGCAGTGGGGTGAGGGAGCGAATCGCAGCACATGGGCTGCCCCCTCCG
CCCCGCCGGGTCTAGTGCCCTACGGATCCCCAATCCCTGCGCGCTCAGGCGACC

5 GAGGTTCGGGAAGAGGGGCCACGTCCCTGGAAGCAAAGAGGACGGCCGCCTCTGC
CAGGAGGGACTCGGTGAGTTCTGTGTGGCTCCCTCACGGAAGCTTCTGATCAGGG
AAGAAAAAGCCACTTTCTCTGCCTCACCCACCCCCACAAGCAGCTCACTTGTGAA
GGCATCTGACACCTGAGTCAGAACCAGAATTTCAGGGACACATGGGACGGGAGCT
GCAGGGACAGGAAAGGAGGGAGGGGGTCAAACGGGGGCCAGATGCCAACACCT
GAGCCTGCCCTGACAGAGCTAGGCCACCGCCGTGGAGGAAGGGCTCTAGGTGCA

10 GGCAGCTCTAGTCTCTTGACCAGCTCCACCTGGGCAGCGTCCTGCAGCGCTTAGG
AGGGTTGAGGGTTGCCCAACACTCCCGAGGGAAGGCCAGCCTCAAGGGTCCTGA
CCCAGTGTTGCCTACCAGGCAGTTTGGGGAGAGGCCCAGAGCAGGGGGCCCCAGC
TGCACACTCTCATGCCCTGGGCAGCTTACAAAGAAAAAATTATGTCTGAGGCCCT
CCGCAAAATTGGTCCAGCCTGTGGGGCCGACTGGAAACCTTGGCACAGGAAAGTC

15 CTCAGGTGGGTGGTGAAGGGGAGGGCAGGCAAGTCTTCTCCAGGCTGCCACCC
ACCTCAGCACACTGCAGGGAAGGGGTGACCCCTCTGCCAGCAAGCACACGCAT
TTCCAGCAGTGCCAGTCGTTCTACGTTTTGTAATGGGGGCATGCTTTCCTAATTC
CTTGTGCTCCTGGAGGGAAGGGTACCTGGTACCAGCCTGCCTTTTCAGCTCTCCC
CTCTGCCAGCTTCACACTGCCCCCCACAGGGAGAAATTGGGAGGCGGAGCTGCAC

20 TACAGAAATGGGTTTAGCAGTAGAGGAGACATGGAAGCAATCCAGACTTGAGT
AAATA CATTTTTATTCAGAACAAAGATAATAAAAATAGCGTGC ACTTTATTTAA AACC
AACCAAGCACTGATAAAAAATATATATCACTGCAGCTGTGATTCCACATCAAACC
TGAACAGTAAGAATTGGGCATTTATTCTTCACATCATGTGCCAAGCCTGGCAGAG
AAGGACATCCACCTCCACTAGAGCCTCAAAGGAAAAGTGGCCCCTAACCACCAA

25 GACAGGGTACCCTGGTGGAGAGGGGCAGCTGGCAGCTCACCTGCTCTCTGCAG
ACCACGTGAAGGGAAAGGAGCTGCCTGTGTTCTCCCGGGCTGCCGGGGTGGGC
ACTGGTCAGCAACTCCTTCTCGGTTTCAGGTTGTGGAGCGATGGGGAGAGAAGTG
CATGCAGTTGTGCAGACAAGGAGGCGGGTCCTCCCTCCTCTTTCAGGGTCTCTGA
AACCCCCACAGGGCATATAATGCCAGCAAGGTCCCACTTGCAGGCACATGCCT

30 ACAAGCAGCAGCCATCTTTTGCTTTGGCTGATGGGGAATCAAGATTCTGAGAGT
GACTGCTCTTTTCTTGACACAAAGCAGCCACAGAACACTTTCCTACATACAGTAT
GGCAGCAGGCAAGCAGAAGGCCCTGCTGGCTCGGATTAAGGCACTTGAAAGAGA
CACAAGGTACATCCTCCTCCCTGCGAGCCCCACAGGCCTCAGGGGACCCTGTTT
CCCCACCCTTTATCCTCAGGTCCCCTTACCCCTGCCCTCCCTACTGCTGGGCAAT

35 GAGGAGGACAGGAGCGTGCCTTAAAGGACCATGGTTTGGTGGGAGTACAGGGTA
GGAGGATGAGGAAAACAAGAAGGGAGCTGGAGATTTGGCCAAGGAGCAACTTC
AGAAGGACAGGAGAGCACGAGCATTAGGAGGAAGCCAAGGCAGCAGCAGAGGG
AAGCCAGTTAAGTCATGAGAGACCAACGGCAGTGATGTTTGCTGGCGCAGATGC
AGAAGCCAGAGGGAGGCCCTCCAACCTTCCCTGGTGAGGCAGGCTGGGAGCAG

40 AGAAAGGGTTAAGAGAGCCAACCCAGACAGAGAACCTCAGAAGACAGGGCCG
CAAGGACAGGCAGGGGGAATGGTCTTTCTCTGTTTCTCTTGCTAGTGGGGCTGC
GGCAAGGATCAATGTTCTGAAGGTTTCAGAGACAGGGCAAGAAAAGGGCAGGGG
GCTGGCAGGAGGGCTGCATGGCCCCGAAGCAGCTCAGCTCTTTGGTATGACACT
GGCGGTGTGTGGGGCATCCGGCTCACTCCTCCTCCACTGCGGGCCCCCTTGGC

45 CGCTCGCCTCTGGCGCCAGCGCAGCTCCTCCACCTGGCGTTCCAGCCCTCGCACC
TTGGCCTCGAGTTGGGCCCCAGAGGCTCGGGAGCCAGTGAGCCGGCTCAGCAGG
GCGTAGAGGATCAGCAAGGCCAGGAGTAGCAGGGCCCGGGTGAAGGGTCAGG
CACCGACCTCATCAGGGCCACGAAGCCGGCCAGGAAGATGACAAGCTTCAGGCC
CCACAGGATCCGCCCCAGCAAGGCCAAGACCAAGCCGAGGAGCAGAGACAGCA

GCCAGTAGACGACCAGGGCCCCTGCTCCCCACAGCAGGAAGGTCTGGACCTGGC
CAGGGCTGAGCTTCAGGCCCTGGGCGAGGTAATCACCTGGAAGCCAAGAGAGTC
ACAGAGTCAGCCAACCTGGAGAAGTGGTGAGGGGAGAGCGGGGCAAGAGCTAA
AAGGGTGGGAGGTGCTAGGCACATTGCAAAGGAATAAGCCGTTCTCGCAGACTC
5 AGAGTGATATGGGTTGGAATCTCAGCTCTGTTTCTTGCTGGCTGTGAGGCCTGGA
GTAGATTACTTGCTTCTGTTGAGCTGCAGTTTCATTTACTAAACGGGAACAATTCT
ACTGCCTCCCTGTACTGTGGCTGGCAATTAAATGAGATACTACAGCTCAGCACGA
TGCCTGATAGGAAGTGAACAACCTGGCACGTGGTGGCGGAAGTTCTTTTTTAGGGG
GTCTGGGTGGGACAGGGTTTTGCTCCATCGCCGAGGCTGGAGTGCAGTGACGTG
10 ATCCCGGCTCACTGCAACCTCTACCTCCTGGGCTCAAGCGATCCTCCACCTCAG
CTCCCAAGTAGCTGGGACAACAGACACACGCCACCATGCTTGGCTAATTTTTTAT
AGAGACGAGGTCTCATTATATTGCCAGGCTGGTCTCAAACCTTCTGGCCTCAAGT
GACCCTCCTGCCTTGACCTCCCAAAGTGCTGGGATTACAGGCGGGAGCCACCACA
CCTGGCCATGGTAGTTCTTGGCTTGCTCTTTGGCCATGTCTCTGCAGAATCCTGGG
15 AAGGGTTAAGCAGCTTGGGGAAAAGGCTAGACCCTGACAAAGATGAACTCCAC
AAGTAGGAAAGTACAGGCCAAAGCTCTGGCTGACTACCCAGCACTCGAACACTCA
CCAGCTAGTCCCAAGGCATTACAGCAGCTGTGCGGCGATCCCAGACAGAGCAAAG
AAGGCCACAGAAATGGCTGATGAGATGGCCCACAACACTTGGGACGAAGACTGT
GGAAAGAGCACGGAGCGAGATGAGTTCATAATGAACAACGGTCCTCGCCTTCAC
20 GCCTGATCACCCTGTCCAGGCAAGAACTGCAGGAATGTCTCAGACCTGTTTCTC
ACCCAGTGGTGACAGGCCTGGGTGAGAGGGTAGGGGCCTTGGGCCTGGCTGAGG
GGTCCCTTCCACATCCACCTTCTAGTCTACAGGGATGGCCAACAGGCTGTCTCTC
CTTCTGAACTGGAACTAGGGCATCTGGGACATAATTTAACTGCTTTGCTGGGA
TACTTTGGAGGGAGTAGTAGGTGTACTTGTGTGTGAATGACGGAGACAATCAAA
25 TACTTTTAGTAGTCACCCTATAAACTGGAGGCCTGCTAGCTGTCCAGGGAGTCA
TGAAGGTGCGTGGAGAACATCTGTAAAGGGATAGGATGTTCCAGTGAAAAAGGA
GTCTATCAGCTATACTATATTATGGATTAAATAAATGATTGTCTCAGCCCTTCAGT
CCAGCCTATCAAAAGTATGTGATACCATGCTTGGGATGCCACCAGGTAAAAAAA
GATAACCCTGCCTTAGGCTCCCAATAAGCTCAACCCACTTCTGCAGGTGAAGGAA
30 TGGATTACAGGACTTGATATTTTGCCATTTTCGAGATTCTAGGTCAGATTTAGACCA
AAGTGAGACTCTACAGTCACCCAGTAACATGGGCTTATAAAGATGGCTCATTTCC
CAGCCTTTCTGGCAAGGAAAGGGCAGGAGCCAGGAAAGGATAGGGGTGGAGCT
AAAAGGCCCTAGGACAGCAATCAAATAACGAGGAATTCAAAGACAAGTGCTGTG
TGGCTTCTTTTTGTGGAATTTGGGGCTCTCTGCACCAGAGAGGATGTGGAATAA
35 GATGAGGTGGCCATTACCAACCTTTCTTCTTTTATTTTCTTAATGTGTGTAGTC
ACACAGGGACTACCTTCCTTACCTCTGACACCAGGTGCATGGTCTCTGGCCCAAT
CCAGGCATCCAGTGTCCCTCGCACAGATCGACCTATCTGGGTCAAGACATCAACT
GGGGCTTCTCTCTTCTGTTGGCCTGGTGGTGCAAAGTCTCGACGGGACTGGGCCA
ATGCTGAGTGGAGGAGGATAAAGGGCCACTAGGACCATCAGAATGGCTTTGAACA
40 CATGCTTTCCCATGGTGAACCTGATGCTGGAGGCTGCCATGACTGGGTCTGCCAG
GAGAGAAGCACAGTGAGCTGAGTGCCATGGTAGACACACTACCCTCTCAGCTC
TGATTATCCCAACATCCTTCTCCACCCCTACCCCAAGCAAGCACCAAACTAACCC
TGGAAGAAAGTGCTGTAGCTGGGAGAGGAAGGACTGGGACTTCCAACCTGAAG
CTGGGCACAACCATCTGACTCACAGGTTCTCTTTTACATTCTTTACCACTTGCAT
45 ATTAATTAACCAGCAAGTATTATTCAACACTTTAGAGTTGGCGAGAAGATCTCTC
TAAGGTTTGTGCCAGTTCTAAAAATCTGAAGGCCTGTCCCTGTATCTTAGGTGCT
ATAGGCATAAAAGTATTATAAGACTCTATAAAGGCTCTGTCCCAAGGAGCTTATA
ATCTACTTAAGATACAGCTGGTATAAAAAACAACCTTAAAAATAGCACACAAGTA
GGATTACTGCCATATAATGGTATAAAGAAAAGTGCTCAGTTATGTGCTCAAACAA

GAATAACTGCACATATGTCATCTTCTCTGCAGGACCATCATGTGAGGTGGCTTTT
ATCCTCCTCGCCCCCTACTGGTACAGACGAGAAGAACTGTGACTCAGAAGTTAA
GCATTTTCCCATGGTCACTGGGCTACACAGAAAGGCCAGGATTTGAACCCAAGCT
TCTGCTTCCACCCATCTTCATTAGGAGTCAAGTTATACTGTGGGTCTCAACCATGG
5 CTGCTCACTGGAATCACCTGGAAGCTTCCCAAGTACTGATGTCTGTGTCCCCAGC
CCAGAGGTTCTGATATCATTGTCTGGGTGTGGCCTAGCCTTGGATCTGCAAAAGC
TCCCTAGGCAGTTCCACTGCATGAAGTTGAGAACCACTGATACAGAGTGACCTCA
CCTCCCCACCCCCAATGGAGGTGCTATGGTTTGAAGAGCAAAACTCATGTTGAAA
TTAACTGTTCTTGCACCTCCTGCAGAGCCTGGGAGCTCCCAGTCCAGCCAAGGA
10 TGTGATCTCATGGTCCTAAGTACTTCTTTGACACCCCATTTCCCTCAGTAAAAT
AGTTTGACCCCTTCTCCACCAAAAAAAAAAAAAAAAAAGAAAGAAATTTAATTGCCA
TGATGATGGTATTAAGAGGTGGGACCTTTAAGAGGTGATTAGGTTATGAGGGTTC
AGCCCTCATGAATGGATTAATGCCGTTATCTTGGGAGTGGATTAGTTATCCCAGG
AATGCAGCTCCTGATAAAAAGGATGACTTTGGCCTGATTTCCCTGTCTCTGTCTCAT
15 GTGCTGGGTTCTGCCTTCTGCCATAGGATGACCCTTGCCAGATGCCAGCGCCATG
CCCTTAGACTTCCCAGCCTCTGGAACCTGTGACCCTAATGAATTTCTGTTTATTATA
AACTACGCAGGCAGTGGTATTCTGTTATAGGAAGCAGAAAATGGACGAGGACAG
TGAGCAAGGGTATAATGAACAACCTTTAAGAAATACTATTAATAAAAAAGCTAA
CATTCACTAGGTCTTGCCATGCACCACCGCGCTCATTTAACTGTCACAACAGCC
20 CATCGGGTAGGTGTTGCTATTATCCCCATTTTACTGAAGTAATTGAGGCAGGTT
AAGTATTAAGTGGGGAAATCAGCATTGGAATGTAGGTACTTCTGACATTGGACCC
CTCATACACAACAACCTCTGCTGTATTGTCTCCAATAAGTCTCAGAAGTGATTTA
GAAAGTCATACAGGCCAGGCACAGTGGCTCATTCCCTGTAATCCCAACACTTTGGG
AGGCTGAGGTGGGAGGATTGCTTGAGCCCAGGAGTTTGGGAGCAGCCTGGGCAA
25 CATAGGAGACCCTGTCTCTACAAAATAAATAATAAATAAATAGTCAGGTGT
GGTGGTGCCTGCTACTCCCAGCTATTTGGGAGGCTGAGGGGGGAGGATCAC
TTGAGCCCAGGAGGTCACGGCTGCAGTGAGCTATGATCATGCCACTGTATCCCAT
CCTGGGCAAGAGAGCAAGACGCTTAAAAAAAAAAGTCACACAACAGATTATTCA
TGAGTTAAAATAAAGTGGCATCTACCAATCATCTCAGTGAATTACTGGTGAAAA
30 TTACCTAACAACCTTTGTGCTTTGTGCTCTGGTCTTGTAAACACAATGCCACAGACA
AGTTAAGACCCAACAAGTGCCAACTCATTGAAGCAGGTAAGGATCAGCCAAGAA
AAAGTACACAAGTTCAACTTCTACTTGCCACTGTGCTTGAGAAATGTCAGACAGC
GCCAGCAAATTCCTGTTCCTCCAGGTTTCAGAAATGAACCTGTAGCTCCAGGA
GTTTTTCATGATTCAGACCTGATGATCAGAGGCTAAGCCATGCCCTGAGGTAGGA
35 GCAGTCAGGTTTTTTGAACTTTTTGCAGTTACACAGGCACTCAGGGAGTTGACAAT
AAATCCAGAGCCATGAGGGATGGAGAAGGAAGAGAATGATGTCCTAGTCTTGCT
TAGGGGGAAGGAGGAGAGTCTAGGAAAGGGTTCTAAAAATACTACATTTAGGGT
ACTTTTTGGTCCAGAAACAGCTGCTCTAAGCCCTTCCAGAAGCCTGGAGGGTCAA
GCAAGGCTGAAAAACATGCAATTTCATGTAGAAGGCCCTCAGGCTGGGAAAGCCT
40 TCTACTGTCTTTGGCACAAATCAAGAACCAGATGGTTCCTGCCTGCCAGTGGTTCG
CAGATGAGGAAAGCACAGGTGAGTTCCTGAGCTATCTGGGTCATAACCATGTTG
GGGACTTAAAAGAGCAGGGTTGCTATCTTGGGTTGGATCCTTTATCCAAGGACCT
CCACCAGGAGGGATCAAATATCGTTTCCTCAGCCCTAGGAGGTGAGGGTGCCAT
AAGCTGCTCCTCCCACAGCAGCCTGCCTTGTTCTGTGCCAGCCCCAACTCTCCAG
45 TGGCTGTCTGCCCCAGTTAAGGGGAGCTAGGAGACCTTGAAATAAGCCCTCTGCA
GTGAGGCTGGCATCGTTATGCAGACTGATGTTCTGAAGTGCACCAGATACCAAAC
CTAACAGGATTGTGTAGTGTATCCTTTGGAGATAATGAGTGCAGAGATTGGCTGG
CTGGTCTGCTTTTTCAAATTGTTTTCTTTAATAGGATTCCTTCTCATTTTTTCCAG
GTGAATCTCAGGCAGTATGGACTCACTGCTATTAGGCCTCCTCACTTTGGCCTAA

TCAAATAGTTTTACTAAAGGCATGGAAACAGTCTCAGCCTCTGAGAGGAGGAAG
CATGTCTTAAACTTCTTCACCTTCTGCAATGCCTGGCCTCAGACAAATAATAGG
CACTCAATTAACAACCTCATAATAACAAATGTTATACATATCTATACATATACA
TATGTTATAATAATTTTTGTGTGGTGCTTTATAATTACAGAGTGCTTATTGTTTC
5 ATCACTTCATTTAACTCTAACAACAATCTTTTAAGGTATTATTACCCTCTTCATCT
TACTCAGAAAAGTATGGCTTAGAGAGGTTGAGTGACTTATCCAAGATCACACAG
CAGAGCTGGGACTTGACTCCAGTACCCAGGATCTCAATCTTGCCTTTTTGCTTGTC
CCATACCCGCATGCTGCCTTGATAGTGGACATAGTCCCTGCCCTCATGGAGCTGA
AGTTCACCAACAAGCTCAAAGTGGAAGGACATCCAGACTCCTCCGAGGGAACAC
10 ATACCAGGAGACCATCTGCCTTCTGGGCTTACAGGCCATGGTTTTGTACCAAGAG
GTATGAGAGGACAGCAAAAGGTGGGAGACAAAACCTGCCACTTCTGTTTCGGCAG
CTGCAATATGGCTCAGGTGGGTCTGGAGAGCCCAGCCTGGCTGGGGAAACAGCT
TACTTATTGTGTTAGTGAGAAGGCGCCACTGCTTATGTTTAGCTGTGGTTTGCTA
CAAGGGTAGGATGGGGCATTTCGCGCCCCCCCCCTCCAATCAAGGCTCCTTCCTC
15 CTCTTCTCTTTCTTTGTTAGTTTCATTTTCATGCTATGAATCACCAGGTGGCAGG
AGGGGCGGCAAAAAGTGCCCTCTACCGGCTCTGACTGTCCCGCCGCTGCTCATAG
CTGCCCCTAAGGAGCGGCGGTTCTCAACTTTGGCTGCCCATCGGAAGTGCCTGTG
CAGCCTGTAAACAAGGACGTCTGCCCCACCCAGGGCTACTCACTCAGACTCTTC
CAGAGAGGGACTCAGCCCTTTGTTTTGCAAAGCTCCTCAGGAATTTCCGATGCAT
20 AGCCAGCAGCTCAGGGAAAAGTCTAAGCAAAGCTTCAAAGTGACAGCAGTGTAC
AAAGGACCCCTGACTTCCGTCCCAGGCTCAAGTGTGCCACGGACTAGAAGCTACT
ACCTTACGCTGTTACTTAACCTGCCTGAGTTGCAGTCTCCTCAAACGTAAAAGG
GAGTGAACCCAGGTGAAGAGTTGCTGTAAGGAGTTAAGATATTTCTGCAGCAAG
CGCTTTGTAAACTAAACATCTATAGAAATGTTGCAGCACACACATTACCACTGAC
25 TATATATCGTAGCATAATTTAGCAGTTTATCAACCTGCCTTCCCCAGTAGACCGA
GCGACTCCCGGTTAGACTTGACATGTTGGAATCCCCAGCGCCTAGTAGGAAAGAT
GACTAATAAATGTTTATTAAATGAATATTAGCAACCTGCCAAGAAACCGTGAGG
GTCGAACGAGAAAGCCATGGAGAGGTGAGGAGGGAGGTTATTTTAATAGTAGAT
CCAAATATACAGCAGCCACACGAGAAGCACAGCTGAGTCTAAAGGAAGGTCCTA
30 AACAAGGCGAAGCCGCCACTGCAGAGAATGAAGTCAGCGCCCTGGCAGGTTGGG
GGCAGCTCCCCTAAACCCCTGACAGCTGCTGCCAGCAACTGTTTGGGGGCGAG
GGCGACGGCAAAGGGGCGAGCTTCCCTGCCGCTCCGCGCCCTAACCGGGGCGCAG
CCTCCCGGAGACAGGGTGTGAGTGGCATGTGCTATTTTGAACGGCGCGTCCCCTG
CCAAGCGCTGAGGGGTAGCGTCGCTGGCAAGGAACGTGGCGCGACCCATGAGTT
35 TGGGGCCCCCGAAGGGCTCGAGCCGAGGCTGCAGGAGGCTGGGGCCGTGGGTGCG
GGGTTCCGGGGGCTCGGGCTTGGCGCTGGCCTGGTCCCCACGCCCGGGAGCCGCTC
CACCTCTGCCGGACCTCGGAACCTCGCCGCAACCCTCTTCTCCCCGGAAACGTGC
GCCTCCCGGGTTGCCTGGAAACGACGCCCCCGGTTGCATAGCAACGGGGATCCG
GGTCCCCGGTTTGTTCGCACGCTGGGCGCGCGGACCCCTCCCCACTCGGACTCT
40 CCAGGCCTCGCGGCTCCGCCTGGTGCCGCCTGCAGCGGCTGCTGTCTCCCCCTTCC
CGTGCGCTGCCCCACATTCCGACCTCGGCCCCGCTCTCACCTTTCTCAGGCCACTGC
TATCCTTCACGTGCGACTTCGCTGAAACGCGCCACCAAACCCGCGCCTCAACTCG
GGGCGCTGGTTTACCTTCTCCGCATGCGCAAGGCGGGATGAGCTCGGAGACTAG
CCGGCCTTCTCACAATCGAAGCCTGTGCCGGGAGCGCATGCGCCCCGCTTTATC
45 TATTGCGTTTCTTTTTCCCCCACAAGCATTCCCACCGAGAGAAGAATGGGATCG
GAAGTTCCAGCAGGGAACGGAAGTCTCTGGCTGGAAAGGGGAAATAAGTGACTA
TATCTGGGCTGTAGAGTGGGTAAACTGGATCTTTGAAATCGGAGTGGAAGCTAAT
CCTCCTCTTGCCACCACTCGGCATTTTGGGTGATGTAGTTCTAGAGCTACAAATGT
TCCCTGGGGCATTGTGGGCAATGTAGTTCTAACCGAGCCGCTAACGAGCACCTAG

TCTTCCCATACACTTTTCGCGCTAAAAAGGCACAAAAGAGAAAGATATTAAAGG
AGCAATTAAAAGCACACTGCTCTAGGAAAACGAATGCGCTCCCCCAGAGAGAAA
ATTCATACCTGAATACTGTAGACGGCTCCCAAATGTTAGCTCAGAATTTTCAGAGA
AAGAGAGGAACCAACTCTCACTCTCCTTTTTCTGCCACAAAGGCAGTGCATAGGG
5 ACAGGAGGCAGATAAATGCTAGGTAGAAAAGAGCGGGTCCCTGGTGAAACCCCA
CCCTCAAGCCAAAAAGCCTGAAACCATGGCCCAAAGTGAGAACTTCTATCCATG
TTTTTCCAGTTGAATGTTGCCTTTTCCTAAGCCACCCATGGCTCTGCCCTGCCTCA
TCCTGTGCCTAGAAAAGACCCAGACTCATCTGGCAGAGAGGAGAAGCAGCTGGA
TGAGGGGACGACCATGGCTGGATGTCAGAGAGAAGCAGCTTGTCTTCAGAGGGA
10 CAGCTTAAGGCGTAACCTTCTGAGACGAATCTGGCTGGAGATAGCTGGACTTCAA
GGGAAGACTACATAACGGCCTGTCCACCCCCCTCTTTTCAGCTCACCTTCCCTCT
GAAATCCACTTTGATCAGCAATAAAATCCCAGGCATTTGTCCTTTAATTTGTTTCGT
GCAGCTTTATTTTTCTTGACGCTGGACAAGAGCTCGGGAGCCACGAGTGC GGAT
ACAAAAGCTGTACGCTGGCCCTCTGCCCTTGCTGGTGGAGGGCAACCGCGGGC
15 CCACGGAGCTGTTAACACTTAAGCTGTCCACGGACGACAGAGCCAAAAGAACAC
TGTAACATGCCCTCTGGGGCTTCAGGAGCCTCAGGCACTCTGCCTGGACACTGCC
CCGGGGCCTGCACGGAGTTCGCTCCTGCCGGTGTCCAAAAGCGCACGCTCTGGCT
CCTGCACCCACTCACCTGCACGCTCCCTCCTATGAGGGGTGGAACGCGGTGAATC
TTGAGTGAGTGGAGTGTGATCCCCTGGTGCTGAAAAACGGCTGGCTTGTTCAG
20 CGCTTGTGCACTCCAGTTCCCGCCTTGTTCACTTGCGTACTCCCTCCCATGAGGAG
TTGAGAGCAGCGGGCTGAGTAAACGGGGCACCCCTGTTGTGAGTCCTGTGAAAG
GTCAGGGCAATATCCTGCTTCAGCAGCACCGTGAAGGAGAATGAACAGGGCTTC
AGAATGAGGTGATCTCTTGCTGTGCTGTGATCCTGAGCACACAGCTTCATTTCT
CTGAGCCTTCATTGCTTGACGTTCAAGAACTATAAAGGACCTAAAAATACCACTT
25 CACAGTAGGTGTGAAGTTTCAAGGAAGCAACAAGCATGAACATTAAAAA
AAAAAATCCAGGTTGCTGACTGAATGTTTTATCACCATCAAGAGCTGTCATA
GGAGAGCTTCCTTTTGATGTTAAACTTGTTTCTCAAACCTCAACCCTCTAAACGT
AACTCTTCCCTCCCACCCCAACCATTCAGCCTTCCAGTTCTGCCTTCTCCTAGA
GTACACACTCTGTAGGCTCCCAATCTGTCACCTCACCCAGTTGTTTCTTTCCATCA
30 GATGTTCTCAGACACATCCATCTTCATCTGAGCTCTTGTCACTTCTGCCCCTCA
GCTAAGAGTCCTTCTTCCAGGACAGGCTCTGGTAGCATCCTAAACCTCACCTTCC
AGCTTTTCTAACAGTTTCAATTTTACATTTGCTTGTGCGATCCTTTCTGATGTCTA
AGATTAACAATCTCAGGTCACAGACTTTCCTGGGAAAGAAATTTAACCTTTTTTT
TTTTCTATGACAAATTAATTTCTTTTCAACTCTCTTTTCCATGTGGGTTAGTAGAAA
35 CAGTCTCAGACAGTTCAGGGTTCCTCCCATCCTTGATTTTCAGGTCGTAGACACCT
TTTGGAATGAATATAGGGCCAAAGTTGGGGGAGAAAATGTATCTAATCCTGG
CCGGGGGCAATGGCTCACACCTGTAATCCCAGCACTTGGGAGACTGAGGCAGA
GGGATCACTTGAGGTGAAAGAGTTCAAGTCCAGCCTAGCCAAAATGATGAAACC
CTGTCTCTCTAAAAATACCAAACAAAACCTAGCCAGGTGTGGTGGTGTGTGCTGTA
40 ATCCCTACTCAGGAGGCTGAGGCAGGAGAATCACTTAAATCCAGAAGGCAGAGG
TTGCAGTGAGCCAAGATCACGCCACTGCTCTCCAGCTGGGTGACAGTGAGTGAG
ACTCCATGTAAAAAAGAAAAAAGAAAAATTCATCTAATTATCAGTGTCAGT
TAAGCTGGCAACTTCTCCCTGACTAATCTTCTGTCACTTATCCACACAGATTGCTA
CTGAAGATACCTGGGAAATTAAGCTTCTTTTGGGTCTTTGGCCAATGTGTCCCCA
45 TGCTCCCCAGGCAGCAACAGCAGCTTTGGTCTGGGAGCAACAAGGCATAGAGTT
CCTTCCTCAGGGACCCACCAGCACCAATGCATATATCTTTTTCCCTTAACCTCTCC
CTGTTTCTCTGAAACCAAGTGCCCTGAATTTTTTCTATTCCCTGTGGGCTGGCTTA
TGAAACGGAAAAGCCTTGACAGGACTTCCTTTTTCTGCATCCTGCTATCATAGC
CATAAATCCCCAGTAGAGGGACACCTCTGGTTTTGCTCATTGTGATACTACCAA

CACCTAGTATCGTGCCGGGCTGACACGCTATGGGTACTCAATAAAGATTGGTTCA
ACAATTAATTACTGAGTCTCCCTCCTTCTAGTCTGTCCCCTCCAACCCATCCAGT
AAGTGTCTTCCAGAGGAACTTCTGAAAGTATGGTTATCACTCCATAGCTCAAAT
GCAAACACATGCTGTTGTGCTGCCAGCCCAATCACCACCCAAGTTTACCACCTT
5 GGGTTCAAGGCCTCTCCTAAACGGATCCATTTTATTTCCAACCACACATCCAAGT
ACAGTAGTTGAGATGACTGGCCTGTCAGGCAACCTGTCTTCCAACCAACAATCAT
CATAAAGTTCCTGCTATGTGCCAGGCACAATGTGGCACTCTTACACTCTTGAGAG
CAAGAGTAACCAGAACAATTATGGTTCCTGCCATCATGAAGTTTACAGTCTAGTG
AAGAACCCAGACATCAGATACTTATAAATAGATAATTAAATGATTACAGTTCTTT
10 GAAGTGGTTTGGAGGACAATCACAGTTTGCTGTATGGACTAAATTTAAACCAGG
GACCATGAAAAGGGCTCCAGAGGAAGTGACATTTAAGGTGAGACTGAAGTTTAC
ATTGGAGGGTTTGAGACAGGAGGGGGAAGAGGGAGGGGGGAGAGGACAGTGAT
CCAGGCAGAAGTTCTGAAACCAGCCAGCGCGGGTATGTTTGAGGAACTGAAAGG
CCAATGTGGCTGGAAAGAAGATAAAGTGAGACTGTGATGGTCAGCATGGGCCAG
15 ATGGTGCAAGACTTACGGGCAAGTTTCCTCAGCCAGAACTCTCTCCCTCATTC
TGGCCTCAGGAATGACCCCTGGTTGGGGCTCAGAGAATGATACCCCAAAGTATG
GTGCTTTAGTATTGTTTCTGAGCAAATAGGCTCACTGCCTGATGCACATAGAAGC
CAATACTATGGTACCAGCTTTTGAGAACAGAAAGGCTTTATTGCAGGGCCACCCA
GCAAGGAGACTGGAGGCATGGCTCACATCTGTCTCCTAATTTGGGGTCTGGGGCA
20 AGATTTAAGGGGTCAGAGGGTGATATGGTTTGGCTGTGTCCCCACCCAAATCTCA
TCTTGAATTCTCACATGTTGTGGGAGGGACCCAGTGGGAGATAATTGAATCATAG
GGGCAGGTCTTTCTTGTGCTGTTCTTGTGATAGTGAATAAGTCTCATGAGGTCTG
ATGGTTTTGAGAAACAGGAGTTTCCCTGTACAAGCTCTTTGTTTTGCTGCTGCC
ATCCATGTAAGATGTGACTTGCTCCTCCTTGCTTCTGCCATGATTGTGAGGTTTC
25 CCCAGCCACGTGGAAGTGTAAAGTCCAATTAAACCTCTTTTGTAATTGTCCAGTC
TCAGGTATGTCTTTGTCAGCAGCGTGAAAACAGACTAATACAGATGGCAAGGAA
ACGTATTAGGAATTTTGGCTTGGCAGGGTCTGATTGGAGGGTGTCAAATTTGACT
ACACGGGTATGTTGAGGTGGATTTTACCCCTGGATCTTTCTGGTCAACAGACCCT
TTGCTCCTGAAAGAGTTCCAGCATTTAGGTTCCGATCATGTCTAGGTCTTCTTGGT
30 ACCACAGGGAGGAATCATTGGTTCTGGGTGTTGTTAGATGTCAAAGCATTTTCTA
TTGGGCATGCCCTACTGACATGACTTGAGATTTTGGCTCTGTCATACCTACAAGA
GAACATGACATTCTGTTATCAAAAGAGTAGGCCAGTTTGGATTGGTCCTGAGGT
TACAGCATGCTGAGCACTTTTGAATGAAAAGAAATGGGAAGGTCTTAGAAGCTG
CCTTAGAACCAAGGACTTTCTAACCTTCTCTTGCCCCCTGACCCCCACCCTAAGTA
35 CAGGGAGAAGCTCTCTCTAGAAGTTCCTTATCTGACTGAGAAAATTTCTTTTCA
AAGAAATGCAATTGTCTCAAATCTCCCTCCACAGGAACTCATCAAATAACCAG
GAAAGATTAACCACTGGAGAAGAATAAAAAGTCAACCACTCACCCTA
CACCTAGAGAGACTTTTAATCTATTCTTCTGATGGGAGCTCTAACAGATTACCTG
AGAGACCTTATGTGCATAATAAGACAACCTTTGTTTACAATGGAGTTCTGCCCCCT
40 CACCTTCCCACAATTTGTTGCCACCTCCTCCAGAGCTCATAAGAACTTTGTCCCAA
GGCATTGTTTGTCTTGGGGCTCATTCAATTTCCCCTAAAAATTATTTGCTAGCCCT
CCCTAAAAATTATTTGCTAGCCCTCAAATTGCCTACATTTCCCCCATCTCCGTCT
TTCCTGGGTGCCATTTAAGTAAGCATCAGCCACCTGTTCCCTTCTTTGAGCCTCATA
TTTTGTATTACTCCTGTGCACACTCACACACTAATACACTTGTATGCCTTTTCTCC
45 TGTTATTCTGTGATTGTGAGTTAATTTAGAGGGCAGAGGGGA
AACTTTTTTGTCTCCATACCCTCATTGAGTTCTCAGCAAAAAAATCAGCTCCTCAGT
GATGCACTCTCTAAGTGCCCTGCCTCAAGTAGCCGTTCCCTCCAATCCCCAGCACC
TCTGTCTACCTTGCTCTGATTTGTTGTATTATAGCACTTACTACTCTGGAATTTTC
TTCTTAAGTGTGATTGTCTGTGCTCCCACCACCCACAGTAGAGTGTAAGCTCC

AAGACAGCAGAACTGTGTCTTTCTTGTTGACCTTTTCTATCTCCAGTTTTTACAA
TAGGGCTTGGCACATAGGAAGCACCCAATCAATATTTGTTGGATGAATGAAATG
CCTGGGGAATAACATGAATAGATATTTTCGTTCAAAGTGGATCACTGTCTGCTCTG
TGGAAAGTAGATTAGGAGGAGGAGGCCAGGCTGGAAGCAAGGAACAAGTGGGA
5 AGTTACTTTGTTGGTGCAAGACAGAGATGAGATGCCCTTTTGCATATTAAGTCTT
CATAAGAGTTCAGTGAGTTAGTTCTACCCTTGTCACTCACTCCCTCTGTTTTACAGA
TGAGGAACTAAGGCATAGAGAAGTTCATACTGCCAATCACCTGAGTGGTGCTA
GGATTTGAGCACACAGTCTGACTTCAGAGTCCATGCTCTTGGCCACTATGCCATA
TTGCCTTTTGTACCTGTAACTTTTATTTTCTCTCCAAGCTTTTGCTTACGTTGTTT
10 CTTCTTCCGGAATGCCTTTTCGTTCTCCTTCTCCTCTGAATACTGCCACCTGTCAA
AGTCCCTCTCACTCACATCCTGTTCACTGCCCCTTTTGTCTTGATACCTTACAGT
CCACACCACGTCTTTTGCATGATTCCTGAGAGTATCTTATCTTACAGATATCCACA
AAGAATCATACACTATCTGAGCTGGAAGAGAAATAGAAAATACAAAATCCAAAA
TACAAAATAAGAAATTTATAGGAGGCCATTGGTTTGGACTGAGCTCTTCTGCTA
15 GGCCTAACAGACCAAGCTAAAAAGAGTTAGTCCTGCTGAAGCTCCACGCCAATA
AGCTGAAACGAAGATCTTTACGACCTTCTGAGTGTGTATGTGTGTGTGTGTGTGT
GTGTGTGTGTGTGTGTGTGTGTGTAGGGGGGAGCTAAATTCCCAAACAGGCAAGTTT
TAGGTGGCATGATAAGTCCCCTCCACTTTAACCTTTACAAGAAAAGTAATTTTGA
AATTACCAAATGACCAATCCGCTTTTGTCTCTGTTCTGTTTCTCAGTCCTTT
20 TCTGTCTATAAAACCAAGTTCTCCTGTTTCTGCTCATTGGAACAACCATTATATTTT
ATAGTATGAGGCACTGCCCAATTCTATAGAATCGCACCTTAAGTCCCAGCTACTC
CGGAGGCTGAGGCAGAAGGATCACTTGAGGCCAGGAGTTCCAGGATGCACCTGT
GATAGCCATGATTGCTATGACCGCACCTGTGAATAGCCACTGCCTTCCAGCCTGG
GCAACATTGCCAGAGTCCGTCTCTTAAAGAAAAAATCTTTGAACTAAGTTTG
25 TTGTGATTTTGTCTTTTGACAAAGAAGAAAGGGCAATGTGAATTGCCCCAATCA
CAGAGCGAAATGGTAGTAGTCAGGACCAAAACACTTTCTTAGCCGTTTCTTAGT
TCTTGTACCCATCTGTTTCTGTATTTTCTTACCAGGCCATCCAGCAGTGTCTCTT
AAAGGGTAGCCCGAGAAACAACCTGACTTAGAAAAGCGTGGGGCACAGTCTGTCT
ACGCAGACCCGAGGAATCTGCATTTTAACAAACTCACTGGGAAATTCTCGCGCAC
30 GCCAAGGTTTCAAAGACCAGGGTCCCGTGGCACAGTGCCGCACAGTTGTCAAAA
CAAGTGCTGTCCAATTGTTTTGGTTTTAAATTCTCACTGCGTCATGGGAAATGTAG
TTTCGAGCCTCCTCTCTCCCGACGCCCCAGCCAATCCTCCGGCGCTTTACGGAAC
GAGCCGAGTCAATCCGGAATAACCGAGTGTTTCGTGGCGGGCCCTTTCTGCCCCG
GCTGCATTCTGGGAAAGGGCAATTTCCGTTAGGTGCTGAAGGCTGTGGCGCGCG
35 GCTGTCCCCATTCCCACGTGAAGCGCTACGCTAGCATCGCTCGGCTGGCGGCTCC
CAGCTCGCCGCGGAGCAGTCCCGGCAGCAGCGGGGACCGGAAGTGGCTCGCGG
AGGCTCAGAAGCTAGTCCCGGAGCCCGGCGTGTGGCGCCTCGGAGCACGGTGAC
GGCGCCATGTCCCTAATCTGCTCCAGTGAGTGTGGCTGCGGCCAAGCGCGGGTC
TCAGGAGGCCAGAGAGCGGCGCGGGAGCGTGTGCGGTCCGCTGCGGCGCCCCGGG
40 CCGGGGTGGAGGCGGGAATGGGGCGCTCCGGAGGCCGAGCGGCGGCCTGTCAGC
ACCGGAGCCCCCCCCGTCGGAGCGGGGTGCATTTGCGCAGTGCCCCGCAGTTTAC
ATAGTGCTGAGGTTTATTGTGCGCAGACATTACTGAGGCCGGTCGCCTCATTCTA
CAGAGTGGAACAGGTCTGGACAGAGAGAGCTGGTGCAAGGGAAGCAGCCTTA
ATGTAGGAGTCAGAAAACCTCGAGGTCTTGTCCAGGGTCCGCCTCCCATTTGGCTTT
45 ATGAATTGGCTCAAGGCTCTGGGCCTCGGTTTCTCATCTGCAAAATCGAGAGCA
TTGCAGTGGATGTTTTGCGAGGCCTCGCTCGGATAGTCGGAGCTTTTGCAATTTG
CAAAGGTCACATGATGAGTTAGAGGTAGAGGCAAGGCTGGCAGCCAGGTATCTG
GCTCCCAGCCTTACACTGTATGACTAATAAAAAACAGCGCACATTTATAAGCCCTT
ATTGGTTTACAACGCGCTTCCAAGTCTATGATCTCATTTTATCCTCACAGAATTC

CCTAAAGGAGAAATAAAGATCCTGGTTTTGCAGATGAGGATGCAAGGCGCAGGA
AGAGCGGGGCTTATCTAAGGATGCGTAGCTAGTCAGTGGCAGAGCTGGGTGACG
TAGTTAGGTGACACGGATCTTGGACCCTGAATCCATGCTTTTTTCATACCTTCCAC
TATCTTTCCCTTTGATATTTTATCATGACGTACAGACATTTTCCTTTCCCTTTTCGT
5 TGTTCATCAGATTACTCGTTTTCCCTCCCTTTTGCTATTCACCTTCCTTCTCTCTC
AGAACCTGTACATTGATCCAAAGAGGGGGAAGAAGGAAGGGAAATGATGGAAA
AGGAATCCCTCACTTTGAAGAAATTACAGCTCGCAAAGTACCTTCACATTTATTG
TTTCCTTCCAATCTTCGGGAAGCTCTCTTTTACGTTCCCCAGCACCATCCTTCCTG
GCATGGTTCACCTCATTTGTTAGATGTTTACCGAGTGCCCTGGGGGCATCTGCATT
10 GTACTGGAAGTGAGAGACCAGCTGTAATCCTTATCCTCAAGGGGTGCACAGTCTA
CGCAGGCAAGAGTGTAATGATACCTCTATTGCGGGTTGTTGTGAAGATGAATTA
CTGTACTGTATGCCTAGAATTGTGCTTGGCACATAGAAATGTGCCATGCAAATGT
GCCATGTAAATATTTTAAATATTTTATTGTAGCGATTGCCACTTTGCTCCTTGG
AATCTTCCAGGTGATAAGTGTCTGTACGCTAATCAGTTGACTGGTAGCTGGTAGA
15 CTCAATAGCTTCAGGATGGGGACTGGTCACCTAGGAAGACTAAAGGGTATTAGA
AGGTTGGGATTTTCAGTCCTACCCCCCATTTACCTGGGGAAATGAGAGGAACTGA
AGTCGTCAGTAGTGACCAGTGATTTATTGAATCATGCCTTTGTAATGAAGTTTTCA
TAAAAATACAAAAGGACAGGATTCAAAGAGCTTCTGTATAGCAGAACATGTGGG
GGTTCCTGGAGGGTGGGGTGCCAGGGAAGGCATGGGAAGCTCTGTACTTCTCC
20 CATACCTCATCCTATGCACCTCTTCATCTGTATCCTTTGTAATATCCTTTACAATA
AACTGGTAAACATAAGTGTTCACCAATGTTTGAGTCACTGTTGCAAATTAAT
TGAACCCAAAAAGGAGGTCATGGGAACCCTGATTTACAGCTGGTAGATCAGAAG
AACAGGTCAAACAACCTGGGGCTTGCGATTGGCATCTGAAGGGGCGGGGAGTCT
GGTGGGACTGAGACCTCAACCTGTATGATCTGACACTATCTCCAGGTACCTGGTG
25 TCAGAATTGAATTGGAGGACACCCAGATGGTCACATCTGAGGTCACAGAAGTAT
TTTGTGTTTGTGAGAGAATAGGAGAACTGAGTTTGTTATTCCTGTATTCTCAGACT
TTATAATTTCTTTGATAATCTGTCTGGAGCTATAGACTAAGATGGATGGCAGGGA
TTTGAATGGCTTCATGTGTATCTCCATGTCATGGAGTAACTGTATTCATAGAGT
ACACAATCATTGTTTCAGATATGAGGTGGTGATAATGGACTGCTATTCTCTAGGTG
30 CTTGGCACATAGTAGTTGTTAATAATTATTTGTTGACTATATGATTGTCAGATAGT
CAGGAGACTATCTCCTCAGTCAGGAGACTAAAGGAAAAGGTAGTTCCATAGCTG
GAAAGCATTCTGGGGCCAGTACAGAACTGGCTTAGGGTCAAATGTCTTGCTTTCT
GCTAGTTGAGTGTGAGGATGCCTAGTCTTGTTGGGGCTAATAGCAGATGAGGAAT
CCTCTAGGCCCAAGATTGCCTTCACTCCAAGCTCACTACCAGCCTTTTCTCTACAG
35 TCTCTAACGAAGTGCCGGAGCACCCATGTGTATCCCCTGTCTCTAATCATGTTTAT
GAGCGGCGGCTCATCGAGAAGTACATTGCGGAGAATGGTACCGACCCCATCAAC
AACCAGCCTCTCTCCGAGGAGCAGCTCATCGACATCAAAGGTGCCTATTGGCTGC
CTTAGTCTAGGGCCATCTTAGCTCAGAGCCTGAGAGGATGGGAGGTGGTGCCAG
TGCACTGGAGGAAGAGATGGTGGGCTGTTTATGGCTAAAAGGAAAAGATGTGAT
40 GGCGGGGGAGGCCCTGGGTTATGTTCTTCATACCTGCTTTCCCTTTTCGGCAGTTG
CTCACCCAATCCGGCCCAAGCCTCCCTCAGCCACCAGCATCCCGGCCATTCTGAA
AGCTTTGCAGGATGAGTGGGTGAGTTCCCTGCAAGAGAATCAGCATCTTCCCCACT
TGAAGAGAATGCATTGCTGGGTAGGACTTGGGGGTAGGAAGGATGGAGCATT
TTTAGAGGGTAACTTTGTGACATCAGGGATTTGTTTTATTCTTCGTTGTATCCCC
45 AGCACTGAGAGCAGCACCTGGTACATAGTAGGTGCTCTAGAGTTATGAATTGAA
TGATTGAATACATCCTGCAGGACTGTCTGGCACAGTGCCTGACACAACGAGGGC
GATCAATAAATAGCAGCAGCAGCAGTGTGTTATTCTCTTTTAGAGAGGGGACGG
CATGACAGCTGGGATTTGCCAGTAAGTTAGGGAAGGTGGGGATGGGAAAGAGCT
GGCTCCCCTCCTGTCTGTGTGCCAGTGGTTCGCTTGGGGTAGGAGCTCAAGAG

TGTCTGCCGGCACATTTCGTGTTTGCTCGGATATTGTTTGGGTCACTGATACTGGTC
TAGGCTCTGGGATAGGAGGCAGCATCCCCTCCCCAAGGGCTGACTCCACTGGGT
ACTCCCTGCACCCCCACCTCACCTTACAATGATATTTGCTTCTCCCAGGATGCAG
TCATGCTGCACAGCTTCACTCTGCGCCAGCAGCTGCAGACAACCCGCCAAGAGCT
5 GTCACACGCTCTGTACCAGCACGATGCCGCCTGCCGTGTCATTGCCCGTCTCACC
AAGGAAGTCACTGCTGCCCGAGAAGGTGCAGCCTCTCCCCTGCCATCCCCACCC
TGGGCTGGTTCTGCATTGTAATATCCCATTCTAACATCGTCTTTTCTCTCAGCTC
TGGCTACCCTGAAACCACAGGCTGGCCTCATTGTGCCCCAGGCTGTGCCAAGTTC
CCAACCAAGTGTTGTGGTAAGTGTCCCCCTTCCCTTACCAGCAGCCCATTGTGT
10 ACAGTGGCCACAGAACTGTCCTTATGCAGGTGTCTTTGGTGCTCTGTGCCTCTC
ACCCTCACCTTTCTTCTCTTCAGGGTGCGGGTGAGCCAATGGATTTGGGTGAGCT
GGTGGGAATGACCCAGAGATTATTCAGAAAGTAAGTCCTGCTCTCACCTGGTGG
GAGTGCTGATGGGCCCTTACTTTTCACCATCTGTCTGGAGTCCATCGTGACTAAA
ATCACTGTGCTTTTGGGAGTTGAGTGGTGCAGAGCATGGACCCTGGGACCAGATT
15 GCCTGGGTTTGTATTTTGATGCCACTACTTGTAAGCTTTATGACCTTGGCTTACTT
AGCCAACCCTTACGTGTCTCATTTCCCTAGCTTCTAAACTGAGAATATGATCATAT
CCACTGTATAGGCAGGCTGTGGGAATTTAAAAGATTTTCACTACTGATAAGTGCAC
CTTTTAGCTCTTATTGTTATTGAGATTCTTTGCAGATAGTAACTACTTTTATATA
TTTTCTTGTTTTTTTTCTATGAGGGCAATAGGATAGGAATTATAATCCTTATTTTG
20 CAGATGAAAGACACATCTGAGAGGCAGAGCTGGGCTTCCTGATTGCAAGTCCAG
TGGGATTCTCATTTGCAGGGCTTCTTAGTGTCTTTCTGAGCAGTTCAAATTGTCAG
CATGTGTCTGAGCCCTTGGCTTAGTGGCGTGTAGACCTATGGGAGCTCTACAGTC
CTAGCTTCTATTCTTGCTCTGCTGTTTATCACCTCTGCGACCTTGGGCAATTGACT
TCACTTCTCTGAGGCTCAGTTTCCTCAGCTGTAAAATAAGGTCGTCAACACCCCC
25 CTCATAAAGCTGGGATGGAAGTAAGAAGAGAGAATGCCTTTAAGCCTGTAAAGT
AGAAGTTGGCAGATAGCAAGTTCTTGGTGCTGCTTTTGAAAGCACAGGTGTGACC
AGCATCTAATGTACTTTTCTCCTTGCAAGATGATTTGTCTCACATTGAGCCTGTTT
TTCCCCAGCTTCAAGACAAAGCCACTGTGCTAACCACGGAGCGCAAGAAGGTGA
GTTCTCTTTCTGAAGCCTGGAGAAAGAGCTGGCCTGGTGGGAGGCGGTTGACTCC
30 TTAGGAGAGAGAGGGCGGCTGAATCTTGGATTCAATTGCTGCTCTTCTTTGGGGGC
TTTTCATTTTCTCAGAGAGGGAAGACTGTGCCTGAGGAGCTGGTGAAGCCAGAA
GAGCTCAGCAAATACCGGCAGGTGGCATCCCACGTGGTGAGTGTCTGGGTCTCC
ACTGTCTTGAGACAGCCCTCCCGTTTTGTTTTCTGGGGTGGGCGGGCCAGCATGG
GGAGTGCTGAGTGCAGAGCTGTCCAGGTTCTGGCGCTGTTCTGGTGCTGTTT
35 CTCGCCTGGGCTGCTGAGTTGTGAGGGCTCCTCTTTCTGCCAGCTGTGGGTTTCC
TAGTGATGCAGTGAGGGAGTTACCGTACCAGGCAGATAGCCAAGAGGTATGGAT
AAGGAATAGAAGTAACTCTTGCTCCCCTGAGAACATGGGTGACTGGAGATGGCA
GTAGGGGAGGTCTGTGGCTTTGTGGCCTGCTGTGATTTGGCCGTGACAGGGTTTG
GTGTGTCTCTCTGCAAAGGGGTTGCACAGTGCCAGCATTCCTGGGATCCTGGCCC
40 TGGACCTCTGCCCCGTCCGACACCAACAAGATCCTCACTGGTGAGAGTCTGGGCCT
AGCCCGGCAGGCCAAAGTGGGGAGGGGCAGCAGGGAAGGCGCATGCTCCTTGTC
CTCTTCATGGGCATGGGAACAAAAGCATTTCCTTGAGCAAAAAGGGCCTGGGTGG
GCCTGACTCATTGTTTGGTCTTTTTGGGTCTTCTCCAGGTGGGGCGGATAAAAAT
GTCGTTGTGTTTGACAAAAGTTCTGAACAAATCCTGGCTACCCTCAAAGGCCATA
45 CCAAGAAGGTCAACAGCGTGGTGTTCACCCTTCCCAGGTAAGGGGTTCTCCTCG
CCACCCTTGGTTCTTCTTTCCTTGGCTGTTGTTTGTCCCTCACCCCGCTGCTGTCTC
TGTGAAGTGGGGCTGGGAAAGAGCTCTGACTCTGACTCCTGAGTGGGCACTTGG
AGGGGCTCACTTTGGAGTTGTGGAGATTGCCCTTCACTCTGCGTGAGACCTTCTA
AAGCAGTGATCTTCCAGCCAGGGAGAGAACGGAAATGTGTAGTTTGACAAGCAT

ATTCATTGAAATATTTTCATATTAGGGAAAGAAAAAATCTTATAGTGTTCCCTAATA
TAAACTACAGAAAACAAAGCTCAACACAATCTCAACTCACACTTACGAGGAGGA
CAGATATATCTGCTTTCCCATGATCCTCCAAGATGGGTAAAAATCATGTTGACTG
TTGAAAGTGGTGTAGGTTGTAAACAGAACCTCTGGTTTACAGGGTAAAGGTAAC
5 CATGGGACCAGATTAATGATATTATGGGATTCTGAATTTTAAGCCTAAGACAGTTT
GGGTTTGGGGCTGCAGGACATGGTTGGTTTAGTGCTTCGCAGTCAAGATTTCCCT
TGGACCTTAGGGAAATGAGAAATATAAGAATAACATGGTGAATTTTTCATGACT
AAATTTGTTCAAATTGAGAGCACTGTTTTCTTGCTTATGGGGTATTAATAGTTAGG
TCTCATGAAATTGTATTGATAAAAAAAGATGGTAGTTATTTTACCTTATGGCTTT
10 TAATATCCTAACTAAACAAAAAATTGGTGAGTGACGCGAAATTCTCTCCCTGCC
CAAATCTTTTGGAAAATTAACCTACCCTGGAAATCCATAAAAGTGGAATGCACTG
AAATACAGCCATGCAGCCCCCTCCAGTCCAGTACTGCTCAGACCTGTGCCATAC
AGTACAGTAGCAGTTAGCTGCATGTGGCTATTTAAATTTCAATGAAATAGAATAA
AAAATTCACTCCCTCAATTGTACTAGCTACATTTTCTTTGGTCCTGGAAATGGG
15 AAAATTGCTCTCTGTTGCAGTTAGCCTTTTACCCTAGATGGCGAGGACGCCTC
CACAAGCCCTGATGCTGTATGAGTTAGCACTTTAATAGCGTTTACCATTGGCTGT
CTTGGGCACCATTTGGGTGGATAGGTGGTTCCAGGGAGGGCAGAGCTGAAAGGAG
AAGCAATTGTTGGCAGTTGTGGGCATCCCCAGCCCCGTTTTATAAGATTGTTTTG
GTCTGTATCTCTTTTCTGACTCTGATATTCTGTCTTTGTTTTCTTGTAGGACCTGG
20 TGTCTTCTGCTTCCCCCGATGCCACTATCAGGATTTGGTCGGTCCCCAATGCCTCT
TGTGTACAGGTGGTTTCGGGCCCCATGAGAGTGCTGTGACAGGCCTCAGCCTTCATG
CCACTGGCGACTATCTCCTGAGCTCCTCCGATGATCAGGTGCGGTCCCAGCCAGT
GCCCTGGAGAGGCCTGCTGGTCCCCAAGCTTGAACATCCTGGGTGGCAGGAACA
TCTTCCCACCCCAGCTGGTTCCCCAGAACCTCAAAGGAGAATGTTTGCCAGGGTT
25 TGCCAAACCAGGGGCTCTGTCTTGCTGAAGGGCCACCAGAACCTGGGACCCACTT
TCTCACTGACTCCATTGTCTCTTTTTTTTTTCCCCAGTACTGGGCTTTCTCTGACATC
CAGACAGGGCGTGTGCTCACCAAGGTGACAGATGAGACCTCCGGCTGCTGTAAG
TTGCCTCATAGGCACTCAGCTTTTTTGTGTTGCTGTTATTATTTATTTTACATTTT
ATTTAGTCATTTGTTTATTTGTTCTAAAGATATATTTACCATGAGCACCTGTCTAG
30 TGCGGGCTTTGTGCTGGGTTCACTGAGGAATGTGAAGAACAAGGAACCTACCTTT
GCTGCTCTTAGTCTCTCTCCCTGGTGGGCTCTGACCACAGGTCTCTCTTCCCTCCT
CCACAGCTCTCACCTGTGCACAGTTCCACCCTGACGGACTCATCTTTGGAACAGG
AACCATGGACTCTCAGATCAAGATCTGGGACTTGAAGGTAGGACATGGTAGGCC
TCCATCTGAGGCCCAGGGCCAGAGGGAGTGTTTGTGACAATGCAGTGCTAATTA
35 GGTGCTTGTGGCACCTGGCCCTGAAGGTGGAGAGACACTGGCTGTGCGTGTGTG
ATATGATGGTGTGGTCTGGGGGGTCCCGCTGGCTGTCCTTCCTGGAAGGACGTGA
GGGACATCTCAGGTAGGAGTTTGGTGAGCCCCATTTTCTTCTCCTCATGATCTGTG
GGTGACGTATTTTACTACCCACCGCCACTGTAGGAACGTACTAATGTGGCCAACT
TCCCTGGCCACTCGGGCCCCATCACTAGCATCGCCTTCTCTGAGAATGGTTACTA
40 CCTGGCTACAGCGGCTGATGACTCCTCTGTCAAGCTCTGGGATCTGCGCAAGCTT
AAGAACTTTAAGACTTTGCAGCTGGATAACAACCTTTGAGGTGTGCCCTTCCCCCT
CCGCCCAGCTTTCCATTGTGTCTCCTTGTGTTGTCAATTATTTATTGAATTAATCTA
ATTGCTTCTGCTTATCCGCAACTGCCCCATAGTTTCTGTTCCCTTGTGTGACCTT
CTCTCTTTCTATTTCTGGCAGGTAAAGTCACTGATCTTTGACCAGAGTGGTACCTA
45 CCTGGCTCTTGGGGGCACGGATGTCCAGATCTACATCTGCAAACAATGGACGGA
GATTCTTCACTTTACAGGTAGAGGCTGGTCCTGGGCTCCTGGGATCTCTCTAGGT
GCCCAGGCCCGGAGGGAAGCCTCACTGGGTAGGAATTTCTAGGGCTTGCATGA
ATTTACCTAAGCAGCTTTCTGTTACCACCTGAGGCAGAGCTTTATGACTAAGGAA
GCAACTGAGTCAGACTGCATGGCAGTAGATGCTAGTGCTTGTCTGCCACTTCCA

TGCCCTGTGGCATTGGGCAGGTTACTAAAGGGAGAGAAAAGTCCCTCTGAAGTTT
TGATAACTGAATCTAAAATAAATGAACATTAGACAGTGACAGGAGGAGAGCCAT
TTTAATTACGTGCATATGCACGGGAGGCCACATTATATTAGATCTGCAGAAGGG
TCAGATGATTGAAGCTTATACAGTTTATATATCACTTAATAATGGGGATATGTTC
5 TGAGAAATGTCTTGTAGGTGATATCGTCATGTGCGACCATTGTAGAGTGAACCTT
ACATATATCTAAATGGTGTAGCCTACTACACGCCAAGACTATTGCTATAACCTTA
GTATAGTCTATTATTGCTCCTAGGCTACAAACCGGTACAGCATATTAAATGTAGT
GAATACAATTATAACACAATGGTAAGTATTTGTGTATCTAAACAAGTGTAACAT
AGAAAAGGTTTCAGTAAAAATAAGGTATAAGAGATTTTTTTTAAATGGTACACTG
10 GTATAGTGCTTGCCATGAAAGGAGCTTGCAGGACTGGAAGTTGCTTTCAGTGAGT
GAGTTGTGAGTGAATGTGAAGGCCTAGGACATTACTGTACGCTGCTGTAGACTTT
ATAAACACAGTACACTTAGGTTTTACTAAATTCATAAAAAAATTTTTCTTCAGTA
ATAAGCCTTAGCTGACTTTTACTTTATAAACTTAAAAAAATGGATTCTTTTGTAAAT
AACGTTTAACTTAAAACTAAACACATTGTACAGCTGTACAAAAATATTGTCTCT
15 CTTTACATCCTTGTCTATAAGCTTTTTTCTAATTTTTTTATTTTTTACTTTT
TTAAACTTTTTCTTGTTAAAACTAAGACACAAGCACACATTACCCTAGGCCTACA
CAGGATCAGGATCACCACTGTATTAGTCCGTTCTCACACTGCTATGAAGAAGT
CCTGGGTAATTGATAAGGGAAAGAGGTTTAATTGACTCACAGTGAAGTGGGAGG
CCTCAGGAACTTACAGTCATAGCAGCAGGGAAAGCAAACATGTCTTTCTTTACA
20 TGGCAACAGGAGAGACAAATGCTGAGCAAAGGGGCTAAAGCCCCCTATAAAACC
ATCAGATCTCGTGAGAACTCACTATCATGAGAACAGCATGGGGGTAAACCACCC
CATGATTCAGTTACTTCCCCTGCTCCCTCCCAACACAGTGGGGATTATGGGC
ACTACAATTCAAGATGAGATTTGGGTGGCGGCACAAAGCCTAACCATAGCACCA
ACATCACTGTCTTCTACCTCCACATCTTTTCCCACCGGAAGGTCTTCGGGGGCACC
25 AACATGCATAAACCTGTCATCTCCTATGATGATAATGCCTTCTTCTCGGATACCTC
CTGAAAGGGCCTGCTTGGTGCTGTTTTACAGTTAACTTTTTTTTATAAGTGGGAAG
AGTATATTTAATAACCAAAAAAAGTATAGTATAGGCATACCTTGTCTTATTGCACT
TAGCTTTATTGTATTTTATGGATACTTTGCTTTTTATAAATTGAAGGTTTTTGGCA
ACCTTGCCCCAAGCAAGTCTGTCAGTACCATTTTTTCCAACAACATGTGTTCACTTT
30 GTGTCTGTGTGTCAAATTTGGTAATTCTTACAGTATTTCAAACCTTCTTCATGATT
TATTGTGTCCGTTAGTGATCTTTGATGTTGCTATTGTAATTGTTGGGCGGGGGGGC
ACCATGAAATGTGCCCATAAAAGTTACTGAATTTATTTGATAAATGAAATGCTGT
GTGTGTTCTGACCACTCCACCCACCAGCCGTTCCCCATCTCTCTCCCTCTCAGACT
TCCCTATTTCTTAGACACAACAATATTGAAACTAGGCCAGTTAATAACCGTATT
35 ATGGCCTCTCGGTGTCCAAGTGAAAGAAAGTGTCCCATGTCTGTTACTTAAAATC
CAAAGCTAGAAATGATTGAGCTTAGTGAAGAAGGCATGTGAAAAGCCAAATAGG
CCAAAAGCTAGGCCTCAACACCAAAATATTAGTCAAGTTATGAAAGCAAAGGAAA
ATTCTTGAAGGAAATTAAGGTGCTACTCCAGTGAACGCACAAATGATAAGAAA
GCAGAACATCCTTATTGCTGATATGGAGAAAGTTTCAGTGGTCTGGATAGAATAT
40 CAAACCAGCCACAACATTCTTTTAAGCCAAACCATAATCCAGACCAAGATCCTAA
CTCTTGAATTCTGTGAAGGCTGAGACAGGTGAGGAAGCTACAAAAGAAAAGTTT
GAAGCTAGCAGAGGTTGGTTCATGAGGTTTAAGGAAAGAAGCCATCTCCATAAC
AGAAAAGTACAAGGTGAAGCAGCAGATGCTGTTGTAGAAGCTGCAGCAAGTTAT
CCGGAAGACCTAGCTAAGATCATTGACGGTGGGTACACTCAACAACAGATTTTC
45 AATGTAGACGGAATAGCCTTCTATTGGAAGAAAGTGACATCTGGAAGTTGCACA
GCTAGAGAGAAGTCAATGCCTGGTTTCCAAGATGCAAAGATCAGAGTGATTCCC
TTGTTAGGGACTAATGCAGCTGGTGATTTTACATTGAAGCCAAAGCTCATTTAGC
ATTCTGAAAATTGTAGGGCCCTTAAGAAGGTGGGGCTAAATCTACTCTGCCTGTG
CTCTGTAAATAGAACAACAAAGTCTGGATGACAACACATCTGTTTACAGCATGGT

TTACTGAATATTTTTTAAGCCCCCATTAAGAGGTACTGTTCAGAAAAATAGATT
CCTTTCAAAATATTACAGTGCACCTCATTACCCTAAAGCTCAGATGGAGATGTTT
CATGCCTGCAACATCCAATCTTCGGCTTATGGATCAAGGAGTAATTTTGACTTTC
AAGTCTTATTACTTAAGAAATACATTTTATAAAGCTATAGCTGCCCTGGATAGTG
5 GTTCCTTTGATGGATCTGGACAAAGTAAATTGAAAACCTGGAAAGGATTCACCAT
TCTACACGCCCTTAAGAACATTTGTGATTCATGGGAGGAGGTTAAACTATGAACA
TAAAGAGGAGTTTGGGAAGAAATTGATTCCAACCCTTCAGCCCTCATGGATGACTT
TGAGGGATTGAGGACTTCCATGGAGGGGAGTAACTGCAGATGTGGAGGAAATGGT
AAGAGAATTAGAATCCAAAGGGGAGTCTAAAGATGGGACTGAATTGCTGCAATC
10 TCATGTTAAAACCTTTAATGGATGAGGAGCTCTTAGGGATGACCAAAGAAAGTGG
TTTCTTGATGGAATCTTCTACTGGTGAAGATGCCGTGAACATTGTTGAAATGATA
ATGAAGGATTTAGAATATTACATAAACTTAATTGATAAAGCAGGTGCAGAATTTG
AGAGGATTGATTCCAGTTCTGAAAGTTCTACTGTGGGTAAAATGCTATCAAACAG
CATCCATCACAGAGAAATCTTTTGTCAAAGGAAGAATCAAATGATGTGGCAAAC
15 TTCTTTGTTGTCTTATTTTAAGAAATTGTACAGCCACTTCAGCCTTCAGCAAACA
CCACCCTTGTCAAGTTAGCAGCCATCGACATCAAGGCAAGACCCTGCTGGTGGGTC
TTGGAAAAAGATGACAACTCACTGAAGTGTCTGATGGTTGTTAGCATGTTTTAGC
AATAAAGTATTTTTTGATTAAGGTATGTACATTGTTTACTAGACATAATGTTATTAC
ACACTTAATAGACTACAGTATAGTGTAACATAACATTTTTTTTTTGAGATGGAGT
20 CTTGCTCTGTGCGCTAGGCTGGAGTGCAGTGGCACGATCTTGGCTCAATGCAACC
TCCACCTCCCAGGTTCTAGCACAGGTGGGCACCATCACACCCGGCTAATTTTTGT
ATTTTTAGTAGAGACGGGGTTTCCCCATGTTGGCCAGGCTGGTCTTGAATTCCTG
AACTCAAGCGATCCACCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCATGA
ACCACCATGCCTGGCCAACATAACTTTTATATGTAGTGAGAAACCAAAAAAATTT
25 GTGTGCCTTGCTTATTGCAATATTTGCTTTATTGGTAGCCTGGAGCTGAACCAGC
GATGTCCCTGAGATATGTCTGTACATAAACCAGTAACGTACTGTACCTAATTATG
TTATACTTTTTTTTTTTTTTGAGATTGAGTCTTGCTCTGTCACCCAGGCTGGAGTGC
AATGGCATGGTCTTGGCTCACTGCAACCTCCGCCTCCTGGGTTCAAGTGATTCTC
CTGCCTCAGCCTCCCGAGTAGCTGGGACTTCAGGCGTGTGCCACCACATCTGGCT
30 AATTTTTTTTTTTTTTTGTAATTTGTAGTAGAGATGAGGTTTCACTATGTTGGC
CAGGCTGATCTCAAACCTCCTGACCTCGTGATCTGCCCACCTCGGCCTCCCAAAGT
GCTGGGATTACAGGCGTGAGCCACCGCGCCTAGCTATATTATACTTTTATAACA
TGGCAGTGTAGTAGATTTGTTTATACCTGTATCCCCACAAACGTGAATAATGCAT
TGCATTGTGACATGATGATGGTTATGACATCACTTGGTGATAGGAATTTTTCAGC
35 TCCACTGTAATCTTATGGGACCAGTGTGTTGTGTGGTCCGTGCTGACATGTCATTA
TGTGACACATGACTCTATGGCATCCTGAACTGCAGAAGGGAGTAGGGGCCTAAG
GCTTCTAGGGGGTGGTGGTGACACAAGTTATGTGGGGGGATGGGGAGGAAGTGC
ACTACAGAGTCTCTCAGGTAATAAAAGTTGTCTCAGAGCAGACCTTAGATAAATA
ATGCATGACAGTCTGTGACAAAGACTGGCATCTAGTCTTCTCTCTTGTGAGACCA
40 GTTCATTTTCCCTGGTTGAGATTCCAGGAAGGGGATTCATGATGTTCTTTTCAGA
TGACCTGCCCTTAGAGAAAGAGGGGCAAGAGACAGGAGGGCAGGACATGGTCA
GAGAGACCTTGGTTCAAAGCCCTCAGCGTGCCAAACCACCATACTTTGGGGTATT
GTTTTCTGAGATCCAATATTACTTAACCTCTCAGAAAAGTGGGAATGGTAACTAT
AGACTCAGTGGGGTTGTTGAGGTTTAGATGAAAATACATACAGGTGCTCCTTGAT
45 ATACGATGGAGCCACATCCTGATAAGTGCATCATAAGCTGAAAATATTGCAAGTT
GAACCATGGTAAATCGGGGACCGTCTGTGAATACATAGGTCAGAACGGTGTCTG
GCACGTAGTCAGGATTTGCAGTTGTTCTCACTCAGCATTGGGTCTTAGTCTGTGGT
GGGATAGAGCAGTGAATAAAACAGACCCGATTTGGGCACTGATGTAATTTATAG
TCAGGTTAGTAAGGCAGATGTAGATTAATTTACATGTACACATTTAATTGCAAT

TATAAGTGCTAGAGAAGAAAAGCATGAGATGCTGAGAGAATGGGTAACAGGGTT
TCTAACCTAACAGTTATGTGGCCCTGGGTACGTGACTTTCCCTTTCAGATCTTGAA
CTCCTTCATCTAGAAAATGGGAATATTGGCACAGCTTTGCAGGGTGTGACAGCTG
GTGTTGTGGAGATGGCATGCTAATATGCTGGTAACAGGGTGCCTGATGCTCACTT
5 AAGATGCTACATGAATGGGAGCTACTGCTGTGTGTGTTGATGAAATTCTCGTCCT
CATTAGCAGGTTGTGAGCAGGATACAAGATATTTCTTCTTGCCCCGTATTCTCCTG
AGCCCTGCTCAGTGTGTTTGTATAACAAAGGTGTCCATCCTAACAATATGGCTCA
CCGGTTTTTCACCCTGTACTGTACCTGGTGTTTTGATTTAGAACCGAGTTAGGTAGC
TGAAAATACAGCGTGAGCTTTTTAATGGGGAGTTGGTTGACTCCAGGTGTGATCC
10 TAAATCTAGAAGGAATTTGGCCAGATGTTTCATGAATTTCTGGAGTCCCATGAGGA
ATGTTGCCCAGCCTCATCTGCCTCTTATCTGGTCCTGCTCTGTGTTAGGGGCCTGA
GTGCCCTGGGGTTGGAACACTATGAGCTAGAAAATGCTGATGGACTGTTCCACTT
ACGAGCAAGTAGTGAGCACTAGGCATAAACAAGCTGAGCTCTGAGGTTTTTCAA
CTAAACCTAGCCGAAGTGCAGTTGCCCAGAAAGCTCAGGTGAGAAGGGGGGGCT
15 GGCATTGCTTTATTCAATTCATCCCACCAGTGAAAAATGCCAGGCACTGAGGGAGG
CACTGGGGGTAGTGTGCAGGTCAGCCTAGGGAAAACAAACAGGAGCCTGCGGTG
TGATAAATACTAATTAGAGAAGGCCTGGTTGTTTGGGAATCTGTTATTAGGGATC
AGTGTTTCAGACTAAAGGAGGAAAAGCCTTCTCACAGTTGCCTCTTATCTTTCTCC
TCAGAGCATAGCGGCCTGACCACAGGGGTGGCCTTCGGGCATCACGCCAAGTTC
20 ATCGCTTCAACAGGCATGGACAGAAGCCTCAAGTTCTACAGCCTGTAGGCCCTGG
CCCTTCTGATGGAAGCTGGGCCTCATCTCAGTAGAGGGGTAGAATTAGGGTTTGG
GGGGGGGGTGGGGGGAATCTATGGGGGGAGGGGGCTCTGTGGGGTGGGACATTC
ACATCATTTCACTCTGGTCTGAGTGGTGGCCTGAGAACCATGGTGGCATGGACCA
CCCTCATCCATGCAACTCCAGGCCCCATGGGAACGGATGTGGAAGGAAGAACTG
25 TCACCCTCTTAAGGCCCAGGGTCGGAGCCCAGGGCCTCTCCCTTCCTGTGCTTCA
ATGGACGTGGTGGTGGCTGTTCCACACCCATTTTGTGTCAGTTCTGTGAGACAG
GAGAGGCTGAGCCAAGGGAAGTGTGAAGGGGATGGGCAGGAGGGCTTGTGCAG
GGTTTTGTAAGCAGTGATCTAGTTTCATTAATAAAGAAAACAATAACCATAACC
ACCTCCCCGTGTCTGTCTGCACCAGGAGCACCTGGGACTGGGAAGGTCAAGGGG
30 AGGGAGCACACACTGGGACACTGGCTTCCGGGAAGCCCATCTTCCTTTCTTTCA
CAGCTCTTACCCTTTTTTTTTTTTTTTAATTGCACAGCAGAAATAAAAACAAATC
TGCAGATGAAATTTGCCATGTCCCTGCGGTTCTTGACCTTGTGTCTAAAGGCCTC
AAGTCACTAGTCCTGCCACTTGCCCTGTAGACTTGGTTTCTACACAAGCCTGGA
AGGGAGGGAGACCTGCAGGGAAGATTAGCTGGATCTTGTCTGGTGGGGAGGTCTG
35 AGCATCTCCATCAGGGTTCTTTAGTTGTAGGCTTTCTAGCCTGTCCTCAGCTGGCA
TAAGTCAAAAAGGAGATTTTTTTATTGACTCTGGCGATTGAAAAGCTGTGGTAGG
ACTGGTTTCGGGACAAAGATCTGATAATGAATGTGCCTTATAGGGAATTCCTGTA
GGGTACGTGACTGCTTTAGATTGCAGGTCAGGAAAGGCCTCTGAAGTGGTGGT
GATGAAGCTGAAGCTGGAATGAGAGGGACCTGAGAGGGGAGGAGTGTGGCAG
40 GCAGAGAGCAGGTTCTAGGGCTGGACTGAGCGAGATATATGGAGGAACAGGAA
GGAGGTCATGGTGGCAAAGTCGGGGGAACCATGGTGTACAGTCTGGGGTGATTG
ACAGTCCCCTGACAAGGGCCATCCCAGTGGAAGGTGCGGGCTGGCTGCCTCCCT
GGAGTGGGGTAAGAGGATATGAGGTGAGGAAGTGTGGGAGTCAGTGATTATAGA
CAAAAAATAGTGCTGAGAAGGGGAGCTGAGAAATGGGGTGTTACCAGGAGGGG
45 AGCTTTGGGGGCAAAGTATGGTAGGCCATATTGTGGACATAACAGGAGACCTCC
AGGCATGTTTTGCTGGGGCAGTGTTCTGTTGTCAGGGAAGCTCGGCATGCCGTAT
CTGCCTGGGAGGGTCAGGATGCCTACTAGCTAGGGAAAGCTGAAAAACCCACA
GTAAAGAAACCACTTAAGTATAACAAGTTGAATATAAACCATTAACTTACACCA
GTGTTTATTATTAAGAAAAGACCTGGGCCAGGTGCGGTGGCTCACGCCTGTAATC

TCAGCACTTCCAGAGGCCAAGGCGGGCGGATCACGAGATCAAGAGTTCGAGACC
GGCCTGGCCAAGAAGGTGAAACCCCATCTCTACTAAGAATACAAAAATTAGCTG
AGCATGGTGGCAGGTTCTGTAAATCCCAGCTACTCGGGAGGCTGAGACAGGAGA
ATTGCTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCTGGGATTGTGCCACTGCA
5 CTCCAGCCTGGGGGACAGAGCAAGACTCCGTCTTGGGGAAGAAAAAAAAAAAA
GACCAATCATAACAGTTCTCCCAAGGCAGGACATACTTTAAAAAAAGTTAGGAC
AACTGCCTAGTTAAAAGGTGGGCTAACAAACAGCTATGGTTTGCAGATGGTAGAA
TGGGTCACTCGAGTGGGAGAGGGTTGAGGTCGAACTCCCGACCTCAGGTCATCC
GCCAGCCTCAGCCTCCGAAAGTCTGAGATTATAGGCGTGAGCCACCACGCCCA
10 GCCACTCATTTAATTCTTAAACAACCTTTGCCCTTGGCCGGGTGTGGTGGCTCAT
GCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGTGGATTGCCTGAGGTCAG
GAGATGGAGACCATCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATAC
AAAAAATTAGCTGGGTGTGATGGTGCATGCCTGTAGTCCCAGCTGCTTGGGAGGC
TGAGGCAGGAGAATCGCTTGAACCCGGGAGGCAGAGGTTGCGGTGAGCTGAGAT
15 TGTGCCACTGCACTCCAGCCTAGTGACAGAGCGAGACTCTGTCTCAGAAAAAAG
AAAACAACCTTGCTCTTTGCTGTCCAGCAACTCAGCAGATTCTTGGTCCCTGCAT
AGGACTTCATACCGCTCTTCCTTTGCAGAACGGAGCAGAAGGTGGGAGCATAGT
CCTGGCACTGGACTCTCTGGCTTTGAATCCCAGTTCTGGCACTTAGTTGCTGCAA
GACCTTGGACAGATTATTTAACTTTTTTCTGTTTGAGTTTCTTCATCCAAAAGATG
20 GGGATAGTGTACTTACTAGAGATATAGTAAGGATTAAGTGAATGTGACAAGTGC
TTAGAATAGGAATTGCACATCATAAATGCTGCTACTATTAATACTATTACCACTCTC
CTGCTCCCTCTCCCTGGAGTCTGCCCTCCCCAGAGATAGACCAAGTCCTTCAGGA
AGCCTCTGGAGCCCATTGCTGCCCTGCCAGGTGAGTGAGCTTTCTTGGAGCCCAT
GGTTCATGCCTTTAGCATAGCTCTGTGTTACCTTGAAGGTGTTTGCGCATTTGTCT
25 TTCCCACTTAGAATCTTAAGAGCAGAACCAGGTATCCGTTGCTATCATTATCTCT
TCAGCTCATGTCACACTGCTGCCAAGTGCCAGATTGAGAGATTCAACCTTGGGGC
TCAGTCCAATGCCCAGGCAACGTCTGTCTCTTTCTTTGATAAGTAAACACAGAGG
GCTTGACAGAATGTTAGTTATATCAGCCAAAATGAATGAAGAGCTATCACCTCCT
GCCACAGCTCACCAGATGTTGGCCCAGCTGCCTTGTAGGTGAACCTTCTGGAAGT
30 AGATCTTGGTTGGGGGTTGGTGGATTCTAAAGGACTCACCTCTGTTGTCTAGCTA
GTGAGTTTTGTATTTAGGACCCAGCAGCAGTCAGTAGTCCCAGGTGTCCATAGGG
AAATTGTTCCGGTGATATTATCAGTGATTACTGCATCTTTTGTGCACTTGGGCCTTT
GGTGATCAAACCCTGCTTAGCCTCCGCTATTGAAAGTGAGGAAGCATCTATATTG
TTCCTGAGCTTGGAGCACTAACCAAGGAGGTCACCTGGGGGCAGTGTAGTCACA
35 GCAGTCTCCCCAGTAACGTTGGTACTGTGATGGAGCTCCTCACAGTACCACAGAA
TGACCCTGCCAGACAGGTGGTGGTGTCCCCAGTCTATAGATGAGAAGACAAGCT
CAGAGAAGTGCCTTGTTTAGGCCACCCAGTAAATAACGCAGCTAGGGTTTTTAAG
CCGTGTGGCTTCAGAGACCAAGCTGATTAAGATAGGCATGGGCAGCTAATGACC
CACTGCTCAGCTTTGCAGGAGGTAGTATCATAGTTAAATGCAGGCTCTGGAGCCA
40 GCAGCCCAGGTTTGAATCCCAGCTCTGCACCTTTCTGTGATGTGCATCTTTATGTC
TCAGTTTCTTCATCTGAAAAGTCAGTTCTTGGTGCCTACTTCGTAGGGCTCTTGAG
AATTTTATTTTATGTTTTATTTATTTATTTTAAATAGCATTCTAATAGAATC
TAAACATTGATTGGTCTGACAGGTCTTCTGTGTGGCATTTTTTTGTGTGTTAAATT
TCTTAGTGTTTTTTTTAAATTATTATACTTTAACTTCTAGGGTACATGTGCACAACA
45 TGCAGGTTTGTACATATGTATGCATGTGCCATGTTGGTGTGTAACTCGTTAACT
CGTCATTTACATTAGGTATATCTCCTCATGCTATGCCTCCACCTCCGCCCCACCC
AGGACAGGCCCTGGTGTGTGATGTTCCCCACCCTGTGTCTAAGTGTTCTCATTGTT
CAATTCTACCTGTGAGTGAGAACATGCGGTGTTTGGTTTTCTGTCCATGCGATA
GTTTGCTCAGAATGATGGTTTCCAGCTTCATCCATGTCCCTATAAAGGACATGAA

CTCATTCTTTTTTATGGCTGTGTAGTATTCCATGGTGTATATGTGCCACATTTTCTT
AATCCAGTCTATCACTGATGGACATTTGGGTGGTTCCAAGTCTTTGCTATTGTGA
ATAGTGCCACAATAAACATATGTGTGCATGTGTCTTTATAGAAGCATGATTTATA
ATACTTTGGGTATATAACCCAGTAATGGGATGGCTGGGTCAAATGGGATTTCTAGC
5 TCTAGATCCTTGAGGAATCGCCACACTGTCTTCCACAATGGTTGAACTAGTTTAC
AGTCCCACCAACAGTGTAAAAGTGTTCCTATTTCTCCACATCCTCTCCAGCACCT
GTTGTTTCCTGACTTCTTAATGATCGCCATTCTAACCGGTGTGAGATGGTATCTCA
CTGTGGTTTTGATTTTCATTTCTCCGATGGCCAGTGTGAGCATTTTTTCATGTCT
GTTGGCTGCATAAATATCTTCTTTTGAGAAGTGTCTGTTTCATATCCTTTGCCACT
10 TTCTGATGGGGTCGTTTGATTTTTTCTTATAAATTTGTTTAAGTCTTTGTAGATT
CTGAATATTAGCCCTTTGTCAGATGGGTAGATTGTAAAAATTTTCTCCCATTTTGT
AGGTTGCCTGTTCACTCTGATGGTAGTTTCTGTTGCTGTGCTGAAGCTCTTAGTT
TATTAGATCCCATTTGTCAATTTTGGCTTTTGTTGCCATTGCTTTTGGTGTTTTAG
TCATGAAGTCCTTGCCCATGCCTAGGTCTGAATGGTATTGCCTAGGTTTTCTTCT
15 AGGGTTTTTATGGTTTTAGGTCTAACATTTAAGTCTTTAATCCATCTTGAATTAAT
TTTTGTGTAAGGTTTAAGGAAGGGATCCAGTTTCAGCTTTCTACATATGGCTAGC
TAGTTTTCCCAGCACCATTTATTAATAGGGAATCCTTTCCCCATTTCTTGTTTTT
ATCAGGTTTGTCAAAGATCAGATGGTTGTAGATGTGTGGTATTATTTCTGAGGGC
TCTGTTCTGTTCCATTGGTCCATATCTCTGTTTTGGTACCAGTACCATGCTGTTTTG
20 GTTACTGTAGCCTTGTAGTGTAGTTTGAAGTCAGGTAGCATGATGCCTCCAGCTT
TGTTCTTTTGGCTTAGGATTGTCTTGCCAACGTGGGCTCTTTTTTGGTTCATATG
AACTTTAAAGTAGTTTTTTCCAATTCTGTGAAGAAAGTCATTGGTAGCTTGATGG
GGATTGCATTGAATCTATAAATTACCTTGGGCAGTATGGCCATTTTCATGATATT
GATTCTTCCTATCCATGAGCATAGAATGTTCTTCCATTTGTTTGTGTCCTCTTTTAT
25 TTTGTTGAGCAGTGGTTTGTAGTTCTTGAAGAGGTCCTTCACATCCCTTGTAAGTT
GGATTCCTAGGTATTCTATTCCCTTTGAAGCAATTCTGAATGGGAGTTCACATG
ATTTGGCCTGTTATTGGTATATAGGAATGCTTGTGATTTTTGCACATTGATTTTGT
ATCCTGAGACTTTGCTGAAGTTGCTTATCAGCTTAAGGAGATTTTGGGTGGAGAC
GATGGGGTTTTCTAAATATACAATCATGTCATCTGCAAACAGGGACAATTTGACT
30 TCCTCTTTTCCTAATTGAATACGCTTTATTTCTTTCTTGCCTGATTGTCCTGGCC
AGAACTTCCAACACTGTGTTGAATAGGAGTGGTAAGAGAGGGCATCCCTGTCTTG
TGCCAGTTTTTCAAAGGGAATGCTTCCAGTTTTTGGCCATTTCGGTATGATATTGGCT
GTGGGTTTGTCAATAAATACTCTGATTATTTTGAGATACATCCCATCAATACCTA
GTCTAGGGCTGGGCGCGGTGGCTTACGCCTGTAATCCCAGCACTTTGGGAGGCTG
35 AGGCAGGCGGATCACAAGGTTAGGACATCGAGACCATCCTGGCTAACACAGTGA
AACCCCATCTCTACTAAAAATACAAAAAATTAGCCGGGCGTGGTGGCGGGCGCC
TGTAAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATGGTGTGAACCCGGGAG
GCAGAGCTTGCACTGAGCAGAAATCGTGCCACTGCACTCCAGCCTGGGCGACAG
AGCAAGACTCCTTCTCAAAAAAACAATAAAGAAACAAAAGAAATACCTAG
40 TCTATTGAAAGTTTTTAGCATGAAGGGCTGTTGAATTTTGTGCAAGGCCTTTTCTG
CATCTATTGAGATTATCATGTGGTTTTTGTCAATTGGTTCTGTTTATGTGATGGATT
ATGTTTATTGATTTGCGTATGTTGAACCAGCCTTGCATCCCAGTGATGAAGCCAA
CTTGATTGTGGTGGATAAGCTTTTTGATGTGCTGCTGGATTTCAGTTTGCCAGTATT
TTATTGAGGATTTTTGCATCGATGTTCAATTGGGGATATTGGTCTAAAATTCTCCT
45 TTTTTGTTGTATTTCTGCCAGGCTTTGGTATCAGGATGACGCTGGCCTCATAAAT
GAGTTAGGGAGGAGTCCCTCTTTTCTATTGATTGGAATAGTTTCAGAAGGAATG
GTACCAGCTCCTCTTTGTACCTCTGGTAGAATTTGGCTGTGAATCCGTCTGGTCCT
GGACTTTTTCTGGATGGTAGGCTATTGTTGCCTCAATTCAGAGCCTATTGTTGGT
CTATTCAGGGATTCAACTTCTCCTGGTTTAGTCTTGGGAGGGTGTATGTGTTGAG

GAGTTTATCCATTTCTTCTAGATTTTCTAGTTTATTTGCATGGAGGTGTTTATAGT
GTTCTCTGATGGTAGTTTGTATTTCTGTGGGATCGGTGTTGATATCCCATTTATCA
TTTTTTATTGCATCTATTTGATTCTTCTATCTTTTCTTCTTTATTAGTCTTGCTAGCA
GTCTATCAATTTTGTGATCTTTTCAAAAAATCAGCTCCTGGATTCAATTGATTTTT
5 TGAAGGGTTTTTCGTGTTTCTATCTCCTTCAGTTCTGCTCTGATCTTAGTTATTTCT
TGCCTTCTGCTAGCTTTTGAATGTGTTTGTCTTGTCTCTAGTTCTTTTAATTGT
GATGTTAGGGTGTCAATTTTAGATCTTTCCTGCTTCTCTTGTGGGCATTTAGTGC
TATAAATTTCTTCTATGTACTGCTTTAAATGTGTCCCAGAGATTCTGGTATGTTG
TGTCTTTGTTCTCATTGGTTTCAAAGAACATCTTCTTTCTGCCTTCATTTTGTAT
10 GTACCCAGTAGTCATTACAGGAGCAGGTTGTTTCAAGTTTCCATGTAGCTGAGCGATT
TTGAGTGAGTTTCTTAATCCTGAGTTCTAGTTTGATTGCACTGTGGTCTGAGAGAC
AGTTTGTACAAATTTCTGTTCTTTTACATTTGCTGAGGAGTGCTTTACTTCCAAT
ATGTGGTCAGTTTTGGAATAAGTGCGATGTGGTGCTGAGAAGAATGTGTGTTCTG
TTGATTTGGGGTAGAGAGTTTGGTAGATGTCTATTAGGTCTGCTCGGTGCAGAGC
15 TGAGTTCAAGTCCTGGATATCCTTGTTAACTTTCTGTCTCATTGATCTGTCTAATG
TTGACAGTGGGGTGTTAAAGTCTCCCATTTATTATTGTGTGGGAGTCTAAATCTCTT
TGTAGGTCTTTAAGGGCTTGCTTTATGAATCTGGATGCTCCTGTATTGGGTGCATA
TATATTTAGGATAGTTAGCTCTTCTTGTTGAATTGATCCCTTTACCATTATGTAAT
GGCCTTCTTTGTCTCTTTTGATCTTTGTTGGTTTAAAGTCTGTTTTATCAGAACTA
20 GGATTGCAACTCCTGCTTTTTTTTTGCTTTCCATTTGCTTGGTAGATCTTCCTCCAT
CCCTTTATGTTGAGCCTATGTGTGTCTCTGCACGTGAGATGGGTTTCCTGAATACA
GCACACTGATGGGTCTTGACTCTTTATCCAGTTTGCCAGTCTGTGTCTTTTAATGG
GAGCATTTAGCCCATTTACATTTAAGGTTAATATTTTTATGTGTGAATTTGATCCT
GTCATTATGATCTTAGCTGGTTATTTTGCTCGTTAGTTGATGCGGTTTCTTCCTAG
25 CATCAATGGTCTTTACAATTTGACATGTTTTTGCAAGTGGCTTGACCGGTTGTTCC
TTTCCATGTTTATTGCTTCCTTCAGGAGCTCTTGTAAGGCAGGCCTGGTGGTGACA
AAATCTCTCAGCATTTGTTTGTCTGTAAAGGATTTTATTTCTCCTTCACTTATGAA
GCTTAGTTTGGCTGGATATGAAATCTGGGTTGTAAATTCTTTCTTTAAGAATGT
TGAATATTGGCCCCACTCTCTTCTGGCTTGTAAGATTTCTGCCGAGAGACCTGCT
30 CTTAGTCTGATGGGCTTCCCTTTGTGGGTAACCCGACCTTTCTCTCTGGCTGCCCT
TAATATTTTCTCCTTCATTTCAACTTTGGTGAATCTGACAATTATGTGTCTTGGAG
TTGCTCTTCTTGAGGAGTATCTTTGTGGTGTTCTCTGTATTTCTGAATTTGAATGT
TGGCCTGCCTTGCTAGGCTGGGGAAGTTCTCCTGGATAATATCCTGAAGAGTGTT
TTCCAACCTTGGTTCCATTCTCCCTGTCATTTTCAAGTACACCAATCAGACGTAGAT
35 TTGGTCTTTTCATATAGTCCTATATTTCTTGGAGGCTTTGTTTGTCTTTTACTC
TTTTTTCTCTAAACTTCTCTTCTTGCTTCATTTCAATTCATTTGATCTTCCATCACTG
ATACCCTTTCTTTCACTTGATCAAATCAGCTACTGAAGCTTGTGCATGCGTCATGT
AGTTCTTGTGCCATGGTTTTTAGCTCCATCAGGTCATTTAAGGACTTCTCTACACT
GTTTATTCTAGTTAGCCATTCGTCTAATCTTTTCTCAAGGTTTTAGCTTCTTTGCGA
40 TGGGCTCGAACATCCTCCTTTAGCTCGGAGAAGTTTGTATTACCGATCGTCTGA
AGCCGCTTCTCTCAACTCGTCAAAGTCATTCTCTATCCAGCTTTGTTCCGTTGCT
GGCGAGGAGCTGCGTTCCTTGGGAGGGGAAGAGGAGCTCTGATTTTTATAATTTT
CAGCTTTTCTGCTCTGGTTTATCCCCATCTTTGTGGTTTTATCTACCTTTGGTCTTT
GATGATGGGGACGTACAGATGGAGTTTTGGTGTGGATGTCCTTTCTGTTTGTAG
45 TTTTCCTTCTAACAGTCAGGACCCTCAGCTGCAGGTCTGTTGGAGTTTGTGGAG
GTCCACTCCAGACCCTGTTTGCCTGGGTATCACAGCAGAGGCTGCAGAACAGCA
AATATTGCAGAATGGCAAATGTTGCTGCCTGATCCTTCCTCTGGAAGCTTCGTCT
CAGAGGGGGACCCGGTCGTATGAGGTGTCAGTTGGCCCTATTGGGAGGTGTCTC
CCAGTTAGGCTACTCGGGGGTCAGGGACCCACTTGAGGAGGCAGTCTGTCCGTTT

TCAGATCTCAAACCTCCGTGCTGGGAGACCCACTACTCTCTTCAAAGCTGTCAGAC
AGGGACGTTTTAAGTCTGCAGAAGTTTCTGTTGCCTTTTGTTCAGGGGCTCTTGAG
AATTAAGTGAACGTGTTTCATGTAGAGATGAGGCACTCAGTAAATGTTGACTACCG
TGCATCTTCCGTGCTCTGCCTGCACTGGCATTGTCCTTGAGATTTAACTGTATTGA
5 CACATGTCGCCAAGGTCATGGTGGTCCCTGACACTTGACACCTATCGAATAAAGG
CATGGTCTGACTGCCTTCTCTGCTGCATTAGTAAACCTAAGGCTCTGTTGACACA
AAGCGGCTGGAACATAATCCAGGCACGGAGACAAGAGTCAACAGAGCAATACA
GACATGATGCTAGAGTTCTGATAGAGCTGCCAGCACAGAGGACAGGATGTGCAA
CTGTTTtaggatgtcaggtggacctaaggggaggtggcacagccgcgttttgaagt
10 GGAAGTTCCTTAGGTGGACATAGGACAGAGGAACAGAGTAGGGGTGTCTGGTGT
GAGCAAAGGTACTGGCAGCCCCACTGCCTGGGGAAGGAGTGAGAAAGCAGGTTT
GAGGGAACAGGCAGCTGGGGAGGGAGGAGCAGCACTGTGGTTGGAGACAGGCC
CAGCAGATTGTAGTAAGGCAGGCCAGGAGGTTAAAAGTTTTCTGAAATATTAC
CCAAAGTGTCTAAAAATGTACCTGTACAGTTTAAAGAATAGTAAACATCTTTGTG
15 TCCACCAGCCAGCTGAAGAAAGCATTAGGGGCCATCAGTGTGTTCTCAATGAAT
GCATCGCTCCCTGCCCTGCAGAGAAAACCACTACCCTGAAATTGGTGTGATCA
TTCGTTTGTCTTTCTATAACAATTTTACTACTACATTGGGGTTTTGGGGACTGATTTT
TGAGCTTTATATAAATGAAGTCATTCAATCTAGTTTCTTTGATTTACCTTCTCAG
CATCGTCCTTGAGATTTACCTGTATTTACACACATGGCCCTAGTTCATTCACTACT
20 GGGAAAACAAAGGAAAATGGCCAAACAGAACTCACACCAGGTACTGTGACAGC
ATTTATTGAAGGTAGGAGCAGCAGCAGATGTGCCGGTCCTGTGTGGCCCATTCAT
TCTAGGACAGTGCACGCTGGGAGAGGGATCCTGGCCATTGGGCTATGGGGCTTTT
AAGCTGCATGATTAGGAAGCACAGCTCCTCCTCCTGCTGTGATCAAGGCTCTAGG
GTCTGAGTTTTGCTGTTGCAGTTATTTGATGTGGTCAGCCAGCAGCAGGATTTACT
25 GCAGTGTGTTTCGTGGCTGGAGAAGCATCAGCCCTTCCTCTGATGTGATTAAGGG
CTGGGGTCCAAACCTTGTAATTGATCAGTGTCTTAGGCACTTAGCAATGGCCAGA
TTCCATGGAACCTTGTAAGGGGCCAACTCCTTTCCTGGGAGGCCAGCCTGCCAGG
GACAAACAGGTAACTCTTACCTCTCATTCATCGTAGAATTTGATTGTAGGAATA
TACCGGAGTGTATTTATATGTTCTAGTGTTTCATGATGGACATATGGGTGTGTTTCTA
30 GTTTTTTATTTTTATTTTGCTATTACAGTGTTTCTGTGAACATTCTGGTGCAAGGGT
TTTTCTGGGATAGTTAGGAGAGGACTTATATATTAGGGAATGACAATTTTTCAAC
ATAGGTATAACAGTTTATATTCTAATTAACATTGGTAGAATGTTCTGTCTCATA
CCCTCACCAATGCTTATTTTCTGGCTTTTTAATTTTTGCCACTCTGGTGGGTGTAT
AATATTATCTTCAAGTTTAATTTTTTCACATTCATGATTACTGTTGAAGTTGAGCAT
35 CTTTTCAGCCACTTACAGACCATGTGAGTTTTTCCTCTTGTAATGCCTGTTAGT
GTCGTTTGCCATTTTTTCTATTTGTGTTACCTTTTTCTTGATTGTAGCAGTTTTAA
ACATATTTTTGGATAGTAATCCTTTGTCAAGAATGTATTGCAACTATCTTCTCACT
TTGTGCCCTGACTTTTCACTGTGTGTTGTTATCTTGAGACTTATTGTGAGGTGTTT
ATCTTGTTTGCAACTTGATCTGTCATAATTCTCTGAGGCTTTGGCTGAAATCACCT
40 TTCAGACAGGACCTGCATTTGCTTCTTCTGAAGCCTGGGGATCACTTTAAATTA
AATTTAGCCCTTGAGGTTTGTTCTTAGATTGAACCTGAGGGGTTCTTTCTCTTCTC
TCCTTCAGTCTGAGGATTTGACTGCACACACCAGAGAAGAAGGAATTACACTTTT
CATTCTCAAGGTGATTTTTTTTTTTTTTCAATACATCCTGCCCCATGATAAAAATAG
GCAGGATTCCTTGCTGCCCACTTTTGCCAGAGGCTTGTTTCTCCTTCACTCTTGCA
45 CTGAGGACTGGGACCTCTGAAGTTCAGCTTTAGAGGAGGCCCTGCATCTGGACT
TGTTGCCTTTGTAGGCTCCGGGCTTGATCTACAGTTCCTGGACTCATCAAAGCA
GAAGGCCAAGGTCTCCAGAGTCCTGTAGAATTTCCAGAAATAGAAGCTGATTTTA
CTTCCCAGAGTTTTTGCTTTTTATTTTTGGCCTATCTGCACGCCTCATTCCCCATGT
TAATTCAACACTAGTCTAAGAATATTTTAAAATATTTATAATCTGGTATTTTAGTT

GTTTACTTCAGGTTGATCCAAGTATCTAGTGTTCCCTACTGCTGGAACAGAAAGTGG
CACTTTTCCATGAAATGTTCTCACATAAGTGTCCAGACAGGGAGTTGAATTCAGC
TGAAC TAACAGGCGGTGAAGTATTCTGTCCCCTTTATTAAAAACAAAGCACCATG
AAGTTAATTTGCTCTCAATGTATAATGTAAGTATATGGAAGCTGGTGGGGGCCTG
5 GGGAAATGGAAAGACAGGGGATTCCCTTAGGTCTTATATAGATATAGCCACAGCC
TCTGCCCCCATCCCCATCCCCACCTCCCCAAAAGGGCAGGAAGAGACAAAACCT
GACGGGGCCCTGAGCAGCTCTGCTTCCTGCCACAGGTCAGAGACAGTGGTTATTGT
CCCCATCGGGTCTGATGAATTGTTCTCAAGGTCCAGCAGGGGGCCTGCTCACATCA
GGAGGCAGTAAGAAGGGAGGAAGAAAGCTTTAAATTGGGCAAATTTAGACTA
10 AATTTTGTATCTAGGAAAGCCAAAGTTTAGATTGCTTCCCCCGAGAGAAAGCTA
GCACTGCAGTGAACCTTCATTGTTTCATATAGTTTGTATATTTGTTTCAGTAAACAGA
CTCCTTTGACATGGAATTGTTGACAAAATCTATGCACAATTTATCAGTTGCCAAA
ATCATGTACCTATATACACTTGGAAGTAGGAGATACACAATTGCATTGTTACTGG
AATATCACAATAAAGCAAATGGATACTTGGATGATTATATAGGATAGGGGAAAG
15 TCTTTGCCATACTCAAAAATACAAATATGAGAGGGGAAAAATTCATTGTTACATAA
TCCTTTCTAAGATAAAAGAACCCGGCAGAGAAAAGCCAATGGCCAATTAGATGG
AAAATTTATAAAATGAGGATACTGGCCCCTTGATTTGTGAAAGCTCTTTACAGAT
GAGGAGAGAAATAGTGGAGAGTAGATAAAAGACATGAAGGGTAACCTATGCGA
TACCAATGGCTAGAAAGATGCTTGACTTCTAATCAAAAAGAGCCCCCTTCAAAAC
20 GGCCAATGCCATTTGCCTTATGATGCTCAGATAGGCAAAGATTTAGAGTGTTACT
GGCCTGTGGTGGCAAGCCTGCACAGTGGGATTGGGTGGGGAGACACTCAGACAG
TCCCGAGTCCCACAGTCATAAGAGGTGTGGTCTTGACCCAGCAGTTCTAAGACTG
TCTTTCAAGAAAATAGTATACAAAGA ACTATATGCTTAAGTAATTGTGTTCAACA
CTCGTCATCCTTAACCCACTTGGTCTCTATCAACAGATCAAATATCATAGTTCAAC
25 CGCAGTTTAGAGACTACCTCTATTTGAAATGATAGGAAATGACACAAGACATCC
ACCCTTGTGTTAAAGCAAATTCAGTTACACAGCATTATTCCAATTGGTACCTCTG
GAAGTTTGAAATCCTTACATGAGCTTGTATGATGGAGGGAGGGGAAGGAGGAGG
AGTTAATGCTGGAAGGAACCAGAACCAGGCCCTAAGACCAAGTCAACCTGGC
TTCTCCAACCAGCCAAGCTAAGAATCCTCACCTATATCACACTGACCCTGCAGGA
30 TATATCCTGTGTCTCCCTGTACAAGCCAGGAAGTTGGGCAGGGCAAGACTGGCCG
TTGCTAGCCATAGATGGGAAGACAGGCCAGAGAAAGGGAAGTCACTTAGCTTCC
ATGGCAAATGTTTGGGCCTTCCTGCCTTTTATGTTCTCCCTCTAGCTAGAAGAGTC
AAAAGACAGCAGTTTCCCCTAGCCCCCTCTTCGTATTGGCCTGTAACTTGTACAT
ACAAAACCAAACCAAAACATTGACAACAAAACTAAGTAAGCATTAGGCTTGGG
35 GCAAGAGGAAATGCAATTCTAGTCAGTAGTTAATAGCACCCAGTTACTGTTGGCC
GTTATGTACTATTCTAAGCATTCTTATCTGTTAACTCATTTTACCCAATACTTCTAT
GGGAATAGACATTAACCTCATTTTACAGATGAGAAATCTGAGGCCAGGGGAAGT
TGAGTAACTTACTGAATATCACACAGCTAGTAAGAAGCCAGCTCTGGGGTCCAC
ATGCTTGTCCAGTATTCTGAAGACAGGAAAGGCTGAGTAGGCCAGAGCTGGATG
40 AGTAGGGGGTACATGCAGTATTAAGGCCACAGGCATGACTTGAGTACCTCAGCT
CCTCTTGTAACAGCTCTCTAAGCTCGTGCTCTACCTGAAGTCCGGAAAGGTGTCT
GAAACCAAGTTCAGGCTTCCCTACCAGATTCTTCTCCCTGTCCCATTGAGGCCAA
ACCCTAGCATCCTGTCCCCTTCTCCACCTAGAGGATTGACATGTCTAGAAAGGGC
TTTGCTGCCAAGTCAGAGATGAAGGCCCATGCCATACATGGGCAAACCTGGGCTC
45 AGCGGCATAGCCAGCACTGGCACAGACCTGTCTGGTGGCCATGCCACCATCGC
AGCCAGTGTCAGGGCCAGCAGGCTGCCATTCTCTGTGCCAGCCCTTCCCACAT
GGATAGTCTTGGGAGGCCAGGGGAAGGGATGGGAGGCTGTGGTCAGAAATGCA
GCCTTTAGCGGTAGGCTGGCAGGCTCAGGGGGTCTGTGAAGTGCTCCTTCAACTC
AGTCTTAGAGTAACCCTTATCCATGACAGCAGCTGCTCAGGGTGCTTTGAGGATG

CCCTTGTCAGAACTTCTGTGTCTGTGAGGAGGTGACAAGCCTTCACAAGCCATTC
ATTCCTGCCAGGGGCCAGTTCCCAGCTGTTGGTGTTCCTTGACTGTCAATGTCTT
AACCTCCAGTATCTTTGTCCTGTTTGCTCTGCCTGAAATGCCACCGTTCCTTGTGG
AGAGGCAGAGGCTCCCGAGTTGAGCCTTGGGGGACATTGGCCTCTGTGCAGGGT
5 GTGGCATATATGAAGTATTTGTAATCAACGTCACAGTTTTTGGGAAGGACAGAGCTG
ACTTGGAGGAAGTTTCTCACATAAGAAATAGTTCTGTTCTAGTCGTCACAAATAA
CTTCTCCACACCTGGTTTCAGTAGGTTTGAAATGATTGTTTATTGGGCCCATTCAC
TGTCTGTTGCTTTCCCAGAGCTTCTGGGGCCAGGTCTGGCTCAGGGCCACAAAGA
CACCAAACCCAAGGACCAGGGCAACAGCTGGCAGCAAAAGGACCGCCCAAAGG
10 AGAGGTCTCAGGCTGGAGTTCCCATTTGGAGTCTGTCAGAGAGACGGGATTGGCA
GGGCTGGGTGAGGGCCCTCCAACCTCCCCTCCACCCAGAACTTTGTATCACAC
TGGGCAGAGCTGAAGCTGCCTTTCTGCAGATGAGGTGGACTGTGTCTGTCTTCAC
TTAGTTCCCCACTGACTGCAGTGACACCATCTCTTGCCCTCAGCTATGGCTGGAG
CATCCCTGTTTTGTCAGCACAACTTTGGGGGCTGAGAGTGGGTAAGGCCTGAGGG
15 GCCCACCCAGAAGCCCTCCTACCTGTGGGGCCAAAGTGTGGGCTCCTGCCCATAAG
AATCCTCAAAGCCCCTGCCCCCGGAGAGCTCACGATGTCCTGGGGCCTGGCAG
TGTCATTACGGTGACCTGAGGATCGTCGCTGTCCTGCCCAGGGGAAGAATGAAAT
CTTGGGCTGGTCTCCTGCCCTGTGGCCCAAGAGGCCAGGCACAGGCCTGAAGATG
TATAAAGGAACAAATACCACTCGCAACCCAGACTCACTTGTAAGTGCCAGTGCTAC
20 ATGCAGTGGAGCAAGTCTCCAGCCCTGAGGTGTGGCAGGCAGAGGTGCTGCAGA
ACAAGTAAACCTGGTGGAAGGAGAAGAACATCAAAGTGGCTGGCTCAGTGCCAC
CGGGCAGGAAGCACAAAGGGAAGGACATGGAATCCCCGAGCTGGGCCAAGTCT
AGGCTGCTGCTAGCCAGGCAGGGAGAAATCTGAGCTGCTTGACCAAGATGATGA
CTGCTGCCCATGCTGAGGGAGTGCAGAGCTGAATGTGTTCTTCCAGATTTGAAA
25 TCCACACCTTCCTTGCTCCCCAAGGTCCAAGTCTGCAGTGGAGTGCCCTGCAGGC
GGGGACCACCGCACTTCGTAATGCCCCAGTCTTGGCGGGCCTGCTTCACCAATG
CTGCCTCTGGCTGCACAGCCCTGGGAGGGCTGGCTCTCTCCCTTCCACCTGCCCT
ACTGAGGGGAGACAGCAAATTCCAAGGAGGTGGGACTTGGCCAGGCAGCAGGAT
AATAGATGTTTGCCCTCCCTTTGTGACCCCTGGAGACCAGTGACTGGGGGCAGAG
30 GGGAGGGCAGATTACCACCGCTTCCAGATACAGAAGGGCAGGGGCAGTGCCCTA
CGGGACCAGAAGCAGGAGGAGCTGACCCAACCCAGCACCCAGGAGGCCCCACTC
ATGGGCAGCACACAGCAGAGATGAGAACGAAGCCACACTAACCAGTGCTTCCAA
GTGAAATCAGTCTACATCTGACATAATAACAGGCAGTGATTTAAGAATCTAGAG
ATTTGGGTATGTGATGTGAAAGATACGTTGTTCAATGGGACAAGTGCATCTGTCA
35 CCTCTGAGGCCATCTGTATATTACATAGGAGACCTAAATATAACCCTGAGTTTATC
TACCTTTACCTTCTGGAGAAGTTGCTGAGTTAAAGAAAATTCAAAGAATTACATG
GAACACATTATCATTTCTGGAATCAGAAGTGAGGTGAGGCCACCCTAGAACACC
ATGACCAGAGTTCAGATTTAGGGCTGATTGCAGCACAGGCAGCATTTTCCTTCCT
CCTGGTGGTGGTTATGGGTACCTTCTTGCTGACCCGAAGCCCGCTGCTTTCATG
40 ACACCTGGTAGACGCCAAGCCCCATCCAGAACTTTGTCCATATAAGTTCACAGG
GTGCCAGAGGGATTTGGCGACCAGCTCCTCCCCTTAACAGATGGGACCAGGCA
TGCGGCAGCCGGGGCTTCTTACCAGTCTCTGAGGGCTCTCTGGGAGCCTGAGTC
CAGGAGGGCGAAGGTAGCAACAGTGAATCGCTGGTAGTGCGACTGGAAAGGTGT
GGCCCCGTCCAAGGCTACCATTTGGGTCTGTAGCTGTCGCCCTTGAAAGGGCAT
45 CTGAGAAGAGAAGTCAGAGAGGCTGTTTACAGGAGGCAGAGCAGGTGGGGGGA
GTGTGGGGGCACTCACCCGTCTGACAGGATGGGCCACTGGGGCTGCTGGAAGGG
GTTGGCACTGGGAGCGCCCCAGCACTGGTGCAGCAGCAGGACCAGGTTGGGGTC
TGTCCTCTGCAGAAGCCGGACCTCCACATGGACTGGTTCTCGGAGCAGCCTCACG
ATGGGATAGTCATCCTCCCCATAGTACGAGCTGAAGGTCTCGTCTGCAGGGAGA

GTGACTCATGAGCCAGGGCGGGCTGTGCATCAGGGAAGTGGGGGCCAGAAGAG
AGCAGGGATAGCATAGCATACCTTTGGCAATCCGCAGCTCAAGCCGCAGGGGGC
CGGGCTGGGTCATAGGAGCAGGCGATGGGGGTGGGAAAATGGATGCCTGAATGG
GCAGGAAGTCACTGGCGTTGAAGACACAGCGCACATGAAGCCTGAAGTCCACGT
5 GCAAGAGGGTGGGGGAGAAGACACAGAATCAGAGCATCCTGTTTACGTAATAAA
CTAGGCACCAACTCCGTGGGTGCAACAAATAGGGTACTGTCCAGCAGGGCAGAT
GGATGCTACTTAAGCAATACTCAGCATTTCCAAGGCAGGCTCAGGAAGCTCACCC
TGCCCATTCCTCTGCCCACCTGGTCTCCCTGGGATGGCTCAAGCCTGTTATGCCAG
GCCCTGCACCTGGTGGGAGAATACAGCAGGATAGAGATGGGCCCTCGGGGGGCT
10 GGCACCTTGTGGGTCTGCCCTGGCTACCCACAGCTGCCTGCTGTGCCGTTTCGAG
GCCCTGGAGCCTGACAGTTGAGGCTGGTGAATGAGCCTAGGTGCTCTGCCTCCC
GACAGACCTGGATTTGAGTCTTCTTAGCATTTACAGGCTTTGGGACCACAAGCAA
GTCTTCTAACCTAAGCCTCAGTGTCTCATTTGTAAAATGGCTGTGACTGCCTCCC
TTTGAGGGCACTGAGACTGAGTGAGATCACAAAGATAATGCACCTGTGTCTTCATT
15 GTCCTTGTAGTTGCAGCTGGTTTGGCCACAGCCTAAAGGCCACAGTGTCTAGCATC
TTCCTCACTAGCCTAAGGGCCATGGTGGCCACTCCTCCACACTCTGGTGGGGCCA
ACACCCTCCTAGCACCCACAGAGGCCTGGTACCAAGGAGATGCTGAGTAGGTATA
GGAGGCTCACCCCTGTTCTGAAGGCCTTGTGTCTGAGGAGCTCTCTGGCCTAGTC
CTGCTGGCTACAGCTGTTTCCCCCTGACTTCTGCCTCCCTCTGAGAATCCCTAGGC
20 ACTCTGTTGACCTCTGGCTGACTCCCAGAGCTCTTACATCAGAGAGTCTAAAGGC
ATGACACAGACTTGTCTCCACCACTTGGCCATAAGAACATATGGGTTTTTTTAA
ATTAAAATAAAAAATAGAAATGGGGTCTCGCTGTGTTGCCAGGCTAGTCTTGAA
CTTCCAGCAATTCTCCACCTAGGCCTCCCAAAGCGCTGGTATCATAGGCGTGAG
CTACCACCTCTGTGCTACTTAGAGCTTTAAAGCCAAATACATTTGAACTGTGACA
25 CAGTCCCCTGCTCCCCAACCCTCACGGCAGGGCGGGAAGGGGAAGGAGATGCC
AGCAACCATGCAGTGTCAAGCACAAGATTTCTACAACCCATTGGCTCCGTCAC
AGGGTGAAGGTTAGGTGCTTTGCCCCTGGTCACACAGGTTTCAGAGCCAGGCATG
ACAGACAGATTCCCTCGGGTCACCCCACTGGCATCCTGGGCACCTGGGTTGGTT
TTGCCTCTTGAGTCAGCAGGTCCAGGAGGCCCTAACAATGAGGGGTTCTCTCCC
30 CACCCAGTTCTCTCCACCATCCTCAGAGAGGTATCTTCAGCTTCATCTGTGG
CTTCTTAACCTGACATTAGGAGGGGCAACAGCCGTAGCCTCAGCCTCCTCCTGGG
ACCTGGAAGGGGACACTTTCAGTTGCTTTGAGCTTGGTTCTTGAGAGAGACCAAGA
CAGGGCTCTCTCAGGACTCCAGCTCTCTCAGGACTGGCCCTGGGCTTCTAGCCAA
GCCCTGCAGGCCAGGCATGGAAGGGCTCCACTTAACACTCATGTCTGCCCTGAGA
35 GAGGGACATTTCCCTGCCAGCAGGGGAGGCTGGGAAGAGGTGGGCCCCCTTGC
CTAAGATCACATAGCCGGGTAACAGCAGAGCCTGGGTTTGAGCTGAGATGGCTC
CGAAGCCTGTACTGAGCTCGCCTGTGCCCTGACACCCTAGCACACAGCCACGCC
TGTAGGAGGAGGGCTGCCCTTACTGGAAGGTGCTGTCCCGCGTGATGGAACCCT
GTGGCCCCCTTTTGATGTGGATGCCAGACACCAGCCAGTTCTCATAGATGAGCTG
40 GTCGCCAGCCACCTGTAGGAAGAGACAGCTGGGTGAGGCTTTCTGGTGGGGGAC
CAGGCCCCAGCCTGTGGTCCCGGCTCCTACCTGCATTGTGGTTCCACAGTGGGTG
AGAGGGAAGTAGAAGACCACGAAAGCTTCCGTGTGCTGTGTTGGGGAGCAGCTG
GTGGGGGCATAGGCCAGGTGGATGTTGGCCAGTGTGATCCTGTGTGTCAAGGCC
ATTTCTTGGGACACCACGAGGACGAAGTAGCCATCTCTGAAGCACTGGACAGTA
45 GCTGGGACAAAGGCAGATGAGGGCCTTGGGGTTTGGTGTCCATCCAGCACAGAG
ACGGGATGGCTGGGTGACAGCCAGGCTTTAAGTGCCGGTCTAGGAGAATGGACG
CTTACTCTCACTTAGGCTGGTGTGGCCCCAGCAAACCCTTTATGGACTGATTTT
CTCATCCATGTGACAAATGAGTTGAACTACACTCTAAAAGTAGGTTACCATATA
ATCTGTCATCCAAACCAGGGCGTTTCAGATCTGAAAGTCCAGATGTGTGTAAAGT

132

CCCCAGGTCCACTGAATCAGAACCTGCACCTCAACAAGGTGGCCAGGTGTTTCCC
ATGCACACTAACGTGGGAGAAGCTGCCCTGGGTGATGATTCTCCTCCTTGCCCTT
TTCTGTGGTGAGGGGGTGGGGGGCTGGACACCCCCAGGCTGGAGGGAGGCCTCT
GTTCTTGCTCCTTCAGGGGAAGGGTCCCAGCTCCCTTCTGGCAGCAGCCCGTGGC
5 CAGGGAGGCAGGGGCCAGGACTCTGCCAGCACTCACCCACCACCTTGAAGCGGA
GAGTCTGGCCTGGCCTGGGGAACACCAGCAGCTGCATTCCCTTGATCCCACAGTC
GTAGCTGTGCCGGAGGCCTGGGAGGCCAGGGTCGGGCTGGAGCCACCTACCCAG
CCCCAGGGTGGCGACCAGCAGTAGCAGGGCCACAGGGTAACCCCAGGTCTGTGGC
TGAGCCTCCTGCCATGAGACGCCACAGACACACCCCCTACTCCCTCGCCACCAGA
10 GCTGGGCCCAGGCCTTTTATGGAGGAGGTGGCAAGTGGGTGCCTGTAAGGGCAA
AGGGGGCCCACCTGGAGGAGCACCCACCTGGCCACCAGGGGCTGTGGTGAACT
CCTGTTCCAAAGGCAGCGGGAGGCAGAAAGCTGCACGTGGCCCCCTCACCCCTGGC
TTTCTGTCTCACAGCTGTGGCTTTGGAAGGGAGGAGGGAGCTTTCCAGAAAAGT
AGGTTGCAGATGGGCTGTGGGAAGGGATCCAGGGCTAGGAGGTGGCACTGCAGA
15 CCTCAGGCCCTCCACTGTCTCCCTCTCACCCCAGCCTTTCTGCATTCCCTTCCTGC
CCCAACAGGCTCTCCAGGTCCTCCTTCCTGCCTTGAGGCCTCAGGACCACTGGGA
GCTGCCGGCCTGGTTAGTGCAGTCACAGCTCCTCAGGCAGGGCTTTAGGGGCATT
AGAGCAAGACCAGGAAGACACAGCCCTCAGAGCTGGCAGCGGAATGGGGACTG
CAGGTGAGTAAACAGACCAGTAGCACCTCCAAGGGCTCTCCTGAGGATTACAGCC
20 GGTGAGTATGATGATGACTATGACTAATAAAAAATAACAAGGACAATAAATGT
AATGTGGCATCTGGATGGGATCGTGGAACAGAAAAAGGCAGTAAAAGTGAAGA
AAGTGGATTTTAGTTAATAATAATGTGTCCACATTTGTTTGTTCATTAATTGTAAT
AAATGTATCATACTCAAGTAAGATCAGTTATGGGGTAAACTGGGCCTGCGGTGTA
TGGGAAGTGTCTGTACTATCTTCTCAGTTCTGTAAATCTAGAACAGTTCTAAGAC
25 ATAAAAGTGGCTGGAAACAACAAGAATGGCCTGTGGTCTGCCATGATTACAGTG
CCAGGTCTTGCTTGTTAGATCCTTATACCGCCTGACCATCCTCTGAGGAAGGG
ACTGTCACCAGCCCCACGTCCTGGCACTAATTCCTGCAAGTGATTAGCCTAGGGC
CCAGCAGCGTTTGAGCTCAGCAAACATTAGGAAACTGAGCTCAGCAAACATTAG
AAAATGCAGCTATTATAATTAGCAGCTGCTGGAAGGGGAGAGCAAGAGGCTTGA
30 TAGCTAAGAGCCCGGTTCTGGTGAGGTTGCGGAGAAAAAGGAATGCTTATACGC
TCTTGGTGGGGGTGTAAATTGGTTTGACCACTGTGGGAGTGTGGTGATTCTCAA
AGAGCTGAAAACAGAACTATCATTTGATGCAGAAATCGCATTACTGGGTATATAT
CCAAAGGAATATAAATTGTTCTATCATAAAGACACTGAACCTGCGTGCATATGTT
CAGTGCAGCATGATTCACAATAGCCAAGACATGGAATCAAATGCCCATCAATGG
35 TAGACTCAATAAAGAAAATCTGGTACATGCTGAGCACGGTGGCTCACGCCTGTA
ATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCACGAGGTCAGGAGATCGAG
ACCATCCTGGCTAACACGGTGAAACCCTGTCTCTACTAAAAATACAAAAATTAGC
TGGGTGTGGTGGCACGCACCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGA
GAATCGCTTGAACCCAGGAGACGGAGGTTGCAGCGAGCCGAGATTGTGCTGTTG
40 CACTCCAGCCTGGCCGACAGAGTGAGACTCTGTCTCAAAAAAAAAAAAAAAAAA
AGAAAAAGAAAAAAAAAAAAAGGAAAATGTGGTACACATACACCATGGAATACT
ATGCAGCCATAAAAAAGAATGAGATCACATCTCTTGCAAGAACATGGATGGAGC
TGGAGGATATTATCCTTAGCAAACAAATGCAGGAACAGAAACCAATACCATATG
TTCTCACTTATAACTGAAGGCTAAATGATGACAACATATGGACACATAGAGGGG
45 AATGGCACACACTGGGGCCTATTGAAGGGTAGAGGGTAAGAGGAAGGAGAAGG
GTGGAAATAATAACTATTGGGTGCTAGGCTTAGTATCTGGGTGATGAAATAATCT
GTACAACAATCCCTCTGGACATGCATTTACCTATATAACAAACCTGCATAAGTAA
CCCTGAACCTAAAATAAAAGTTTAAACAAAAAAGTTGGTTCTAATGGTGCCCC
AACCCTTTCTTAGCTGTGACTCAGATGCATTATCTATTCTGAGCCTCAGGTTTCC

TGTTTGTAACTGGGGGTGATAATGCTTTCCTTGCCACATGGTGGATAGGAAGA
CACAAAGAGACAAGTCATGGGTACCAGGTGCAGTAATGATTTAATGCTTGGCAA
TAATTCACCTTCTACTGTGATTAAAGCTCAGCTGGGAAAGCTTGGTGGGGCGGGGT
GGGAGTCCCTCTGGGGGCACAGTGGGAAGAGGCACCCAACACAGCATCGAGGAT
5 GGGCGACATGGAAGTGTTTTTGGAGGAAAGGGGTCCTGAGCAGAGGTGGGAGGA
GGCGGGGAGGACAGGGATGGTGCAATGGGGATCTGGGGAGAGCAGAGCTGGAG
GAGGAGGGAGGAAGCAGGTACACAAAGGTCCAGGACAAGGACTCCAGGCAGG
CTGAGGGTGCTGGCGAGGGAAGGACTAGGAGGGGAAGGAGAGGAGCCAGGCAG
GAGCGGGGAGTGGGGTGGATTTTCCCTGAGGGACGATGTGGAAGTTTAAACTTT
10 TAATTTTGAATTATTTTTCAGATTTGCAGAATTTCCATATAGCCTCCTCCAGATTCC
TCAGATGTTCACTGTTCACTTTTTACATTTGCTGTAGCTCCCGCTTCTCTCTCTGC
ATGTGTGCAGACATACACGCACGCACACGCACGCACACGCACACACGCACACAT
TCTTCCATATCATTCAAGAGTCAGTTGCAGAAATGACAGATTCCCCTTTACCTCTA
ATTACTTCAGTATACATTTTCTAAAAAAACAAATCACCCCTACAGTCAAATGATC
15 AAAATCAGGAAACCAACAATGGTATAAACACAACGATCTAATCTGCAGACATTA
TTGTAAGAAATAAAGAGGAAAGCAACATGAAAGGGCGGTTCAACAGGCAACAG
GGACAGGTTTATGTTGAGTAAACCTGAGAGGGGGCGGCTGGCCGAGTTAGGTCAG
AGCCCCACTCTCTTACAGATTAAGAGTTAAGGATTCAGGGCGGGGGAGTTTATCA
GAGGCTTGGACTGCTCCTGTGTCTCTTTGCTGTGCGTATCTGGGAGGGAGAGTTG
20 TGTGTCTGTTCCCATATATCTTTCTGCAGCTACAGGCATATCCCCAGAGTCTGCTT
TTAGCTTCCCTATCTTAGTGCCCTGAAGGAAAAGGAATGTGCTTATTAAGGCC
ACTGTTTTACTGGGGCTCATTGTGTGAGGGTGAAGTTTGGCAGTTACCAAAGAGA
CCTTCCCTCCACCCCGCTCTGTGCCGGAGCTGTCTTATCTGTATTTTACTGTCTGC
TCTTTCTGGCTGTTGTAGTTAGAAGAGAAGTGATTTCTTGAAATGCATGAGGCT
25 AGAAAGGGAGCTGGAGCTTAAAGTGGCAGTATTTGTCCGAGATGACGGTGCTCC
TGCTCTGACAATTACTCAACATCTGCCGACTGTCCTAACTGTGACTTTCATGGCA
AAGGAGTACAGTGGTTTTGGGAGTCTGCAGGATCCAATCCAGGCTCAGAGTCTC
GCTGGCGTGCCTCTTGGCCTCCTCTGATCTGGGACCGCCCTTCTATCTTCTTTGT
CTTTCATACCCTTGACATTTTTTAGTACAGCCGGATGATTTTGCAGAATGGCCCTC
30 AGTTTGGGTTTGTCTGGTGTTTTCTCCTGGTTACATTAGATTTAGTTGATGCATCT
TGGCCTTGATTAGTCCGTTTGGCTGCTGTAACAAAATACAGACTGAGTGGCTTA
AATAACAGTCTTTTTCTCACAGCTCTGGAGCCTGGATGTGCTAGGTCAAAGTGGT
GGCAGGTCTGGTTGCTCCTGAGGCCTCTCTCTTTGGCCTGCAGACAACCGTCTTCT
CACTGAGTCCTCACGTGGTCTTTCCCTGTGCTGGTGCGTCCTTGGTGTCTCTTG
35 AATGGTCAAATCCCTCTTCTTCTGGCTGGCACGGTGGCTCACGCCTGTAATCCTA
GCACTTTGGGAGGCCGAGGTGGGCAGATCACTTGAGGTCAGGAGTTTGAGACCA
GCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACAAACTAATTAGTTG
GGTGTGGTGGTGCACACCTGCAATCCCAGCTCCTCAGGAGGCTGAGGTGGGAGA
ATCACTTGAACCTGGGAGGTGGAGGTTGCAGGGAGCCAAGACGGCACCACTGCA
40 CTCCAGTCTGGAAGACAGAGTGAAATTCCATCCCAAAAAACAAAAACAAATTC
CTCTTCTTCTAAGGACACCAGTCAGATTGGATTAGGGCCACCTTAAGGGGCTCAA
TCTTAAATCACATCTTTAAAGCTCTATCTCAAATACAGTCACATTCTGAGGGA
TGGGGGTGGAGGGTTAGGGATTTTCGCATATGAATTTTGGGGGGATACAATTCAG
CTTGTAACAGAAGTGATGTTGTGTCCTTCTCAGTATCTCGAGGCACACCCCGCTGG
45 CTTGTCCTGTTATTGCTGATGTGACTTTGATCACTTGGATAAGGTGGTGTCTGCCA
GGTTTCTCCACCATAAAGTAATGATGTTTCTCTTTGTAATTCATGAGTATCTTACA
GGGAGATACTTTGAGACTATGTAATCAATCCTGCTCCTCTTCAAATGTTCACTGG
CTAGTGTGGTTGCCAAGTGGGTGGTGGTCTCTAACTCTACCCTTCTTCTGCATT
TATTTGCTATCATAAGAGAGAACTTTTCTAAACGGGGGCTTTTAGGGGCCAGAGA

GAGAATCAGCTGGAGTCTTTGAGAGGCCTGGATTTTGCCTGGTGCTCACTGTTTA
TGAGCACAAGGGCCCTGGGAAGTCACTTACCGGCTTTTTTCTCTATCTGGAGAG
TAAGGATGAGAATGATTATGGTGGGGATGCAATTACATAAGACACGGAGAGGTG
TTTCCCCACTGGTCATGGACCCATGGGGAAAGTACGTCTCCCAAGGTGCTGGAAA
5 TGGGCAGGGAAAGAGAAGGGGGGCTTCCTCAGGGCCAAGGGCAGAACACCTTTG
GGAAAAGGGTACCAGAGTATCCAAGAGAGAGAGAGAGCGCGCACGAGCGCCCT
GAGCCCTCGGTTACGACTCTACGTTCTTGCAAAGACTCATGGACACCAAGAATTA
TCAGCCTGGGAGGATCCCAGCTCCTCTGCTCACCCACTGGAGACCTTGGAAAAGT
CCCTTCCCTGCTCTGTGACTTGCTTTCTCATCTATAAAATGGGGTTATAATAGCA
10 CCTAAATTGTAGGGTTGCTCTGAGGATTAAATGAGATAATCCATGTGAAGCAGGC
AGAACAGGGTCTGCACATGGTCATCATTTGAACACGATAGCCATTACAACCACG
ATTATTTTTATTGATAAAGAGAGAGGGTTCAGATGGAGGTGACTTGACTTGGAATC
TTGGCTTTATCCACTTGGCTTCTGGTTTTTGGGTTTTTTTTTTAGAGATGGGGTCTTG
CTATATTGCCCAGGCTGGTCTCAAACCTGGGCTCAAGCAATCTGCCCCGCTCT
15 GTCTCCCAAAGTGCTGGGATTACAGGCATGAGCCTCCACACCTGGCCACTTGGCC
TGTTTGTAACCTGTTTGTTTCATTTCTTTCTTTCTGTTTTTAACCTATGAATTTTTT
TTAATGGAACCTCAGTTTCTTTCTTTCTTTTTTTTTTTTTGTTTTGTTTTGAGACAG
AGTCTCACTCTATCGCCCAGGCTGGAGTGCAGTGGCGCGATCTCGGCTCACTGCA
AGCTCCGCCTCCCGGTTACACCATTTCTCCAGCCTTAGCCTCCCGAGTAGCTGGG
20 ACTGCAGGCGCTGGCCACCATGCCCCGGCTAATTTTTTATATTTTAGTAGAGACG
GGGTTTCACCGTGTTAGCCAGGATGGTCTCGATCTCCTGACCTTGCGATCCGCCC
GCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCACCCAGTTG
GAACTTGAGTTTCTTAATCTATAAAATGGAACCTAAGAATACAGTCCACCTAAGTG
GGGCGCCGTGTAAGTATCAGTTGCTTGCCCTGTCTCCTCTGTGAATAGAGCCTAG
25 GGAAGGCACTGGAGGAGGATGGAGCCTCTCTAGGCTGGAAAGACAAAATCCCT
TTCAGGGGATCCATGCATGCCAGGAAACCAGCAGGAAGCAGGCTGCCTCACTCC
GGGGCCTGCAGAGTAACCCAAGAGCAGCGCCAGCTGTGTGTGTATGTATGGACC
GTGCTCACCGCAGAGATGCTCCCAGAAGGCCAGTGGGAGCGCATTTAACTGAAG
ACAGGCAGCCCTGCTTCCCCTGAGGGAAACAAAGAACCTCAGAGAATCTCATCAG
30 CTGCGAAGAGCTGGGCTCTGCTGCTGGACCACATGGCTCTGAACTCCAGCTCCTC
TGCTCCCCAGCTGAGCAGGCTTGGTAGGGTTGCTTAAGCTCTCTGAGCCTCAGTT
TTCCCCTTGGTGAGTGACGATGATAGTGGTACCTAACTCAGAGGGGTGCGTGAAT
ATTTGATGAGCTCATCCATGAGCAAGTTTCAGCCTTACGCTGGCACATAGTGAGT
GCCCCATAAGTGTTAGCTATTACTGTTTTCATTTTTTTTTTTTTTTTTTGAGAT
35 GCGTCTCGCTCTGTACCCAGGCTGGAGTGGAGTGGCAGGATCTCGGCTCACCA
TAACCTCCGCCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGAATAGCTG
GTATTACAGGCGTGACCATCACACCTGGCTAATTTTTGTATTTTAGTAGAGAT
GGGGTTTTGCCTGTTGGCCAGGCTGGTCTCGAACTCCTGACCTCAAGTGATCTGT
CCGCCTCATCCTCCCGAAGTGCTGGGATTGCAGGCATGAGCCACCGTACCCAGAA
40 GCTATTGTTGCTTTCACTGTGTTGAATGGTGGCCCTCAAAGACATGTCCACAAC
CTAACCCCTGGAACCTGTGAATGTGGCCTTATTTGGATAAGAGGACTTTGCAGAT
GTAATCAATTTAAGAATCTCAAGATGAGAGCACCTGGATGATCCAGATGAGCC
CTAAGTCCAGTGACCAGTACTCTGTGAGAGACACATGAAAAGAGGGAGGGGGAA
GGCCAGGTAAAGAGGAGGTAGAGATTGCAGTGATGCAGCCCTAAGCCAAGGGA
45 CGCCTGGAGCCACCAGAAGCTGGAGGGGGCCAAAAAGTCTCCTTTTCTAGAGCTTT
CGGAGGAAGTGCTGACATCTGATTACAGACTCTGGCTTCCAGACTGTAAGAGAA
TAAGTCTCTGTTGTTTAAAGCTGCCACGTTTGTGGTAGTTTGTCTGACAGCCCGA
AGAAACAAATACACCACTGTTGTTTCTGCGACGATTGCCTGGCACATGTGTGGGC
CTGAGCCCAGGCCAGGGCTGCCTCTGCCTGCTCTGCCTTCTTGTCTTCTTCTAC

TATAAAGCGATCAGTCCCCAAGGTTGTACCCACTGCAGGTGAAGACAGAGCCAT
GGAGAATTGCACCAGACCATGGGTAAGAAAGGTTCCAGAATGGGGCCGGACACA
GTGGCTCAGGCCTGTAATCCCAGGACTTTGGGAGGCTGAGGCAGGCAGATCACC
TGATGTCAGGAGTTTGAGACCAGCCAGGCTAACATGGTGAAACCCCTTCTCTACT
5 AAAAAATACAAAAATTAGCCGGGTGCGGTGGCGCACGCCTGCAGTCCCAGCTACT
TGGGAGGCTGAGGCAAGAGAGTCGCTTCAACCCGGGAGGCGGAGGTTGCAGTGA
GCCAAGATAGGGCCACTGCACTCCAGCCTGTGCAACAGAGCGAGACTCAGTCTC
AAAAAAAAAAAAAAAAAAAAAAAAAGTAAAGGTCTCAGAATGGGTACCCACAAGGG
ACTGGGGTCCTTTGAGGTCTGCACAGGGAAGCCAATTTTAGAGATTCATTCTGTT
10 CAGCAAATATATGTTGGGACCCCTCTCATGTGTGTCAGGCCCTCTGCTTGCCTTTGG
AGGTGAGAAGATAAAACAGGAATAAGTCTCTGTCTTCAGGTGGCTCATGAGGGT
GGTGAACAGTTGTGTGAACAAGAGTTACCAGGGAAGACAGGGGGGCTGCAGGTC
AAGTGAAGTGGAGATGTGGGAGGGAGGGACAGCAAGTGGGTCTGTCTGAGAGA
ATCAGCAAAGGCTTCCCAGAGGAGGCAACCTCTAACCAGGGTTTGAAGGATGA
15 ATAGGAGTTCAGTGCAGAGGCCAAGGGAAGAAAAGGCATTCCAGAGCAGAGCAC
AAACAGCATAAGCCAGGGCACAGAAACAGCCTGGTGGGCACAGAAACAGCCTG
GTGTGTACAGAAAAAGCCTGGTGTGCACAGGACAGGAGGGGACAGTGGTGAGTG
CTGGCTGATGACAGGATGCCACTAGGGAGTGGCAGCAATGCCAGGGGAGGCTTG
GGTGGGACTGGATCACCGAGGGGCTTGTTGGCCATGCGAGGAGTCCTGTGGGTG
20 ATGGTGGCACCAGGGAACCTCAACCTGGGCCTCCCCAAGGTATCATTTGGGGCCCT
GCCATGCTGCTCCTCTACTGGGTGTGGGTAGCTCGAGGGCCTCCGAGCAAGGGGC
TGGAGGATCCCAGGGCAGGCCTCACCTGCTTCCTGCCCTGCATCTCACTTCCTG
TTTACTGACTTCTTTAAAGTGGCCAGAAAGGAACATAAAAAACCCACCTAGAG
GGAGAAGAAAGCCCATGTGGGCTGGGCCTATGCTTGGGGGCTCCATCTGCCCTC
25 CTTCAATTCCTTTGCTCCCTTGGCTGTATTTGTTAAACATTGATGCTGTAAGTATCC
TCTGAGTATCTAGTGACATTGGTGGTCTCAGAAAGAGGTCCTGCAGGATGAGTCG
TGGAGGGGAAGTGGCATTCCCAGCAGCACGTGCCAAGGCATGGAGGTGGGGAA
AGAAAGGATGGGGTAGCTGTGGACATGAGGAAGGGGGTGCAGGGACTGGTGGT
TGGTGCAGTGGATCCTGAGAGGCCTTGAATGCTAGGTTGGGAATCTGGACAGCTC
30 CCATGGGCAGCAGAGATGCAGCAGAGGTCCCGTGTGCCAGGAAGCGACAGGCTC
AGATTCATCTCCTCCACGGCAGAAGGTGATGCTGAGGCAGCGAGGGACCCGACT
TCCGCTCTTACTGCCTCTGATATTAAGTTCCAAGCCTTGGAGGAGGTTGTAATTTA
GGGACTAGGGCCTGAGCCTGAGTGCAGCTGCATCTTTCTCCCAGTCCTGGGGGAC
ACAAGCCATGGGATAAGGCAGGGCACGGCTCTTCTTCAGAAAATGCCTCTGGGC
35 CCTGCTCATCTGGAACCTGTTTTGGTAACTTTAAGCTTAGTAGCTTTTTTTGTTTAC
TTAGTAATACATTTTCTTTAGAGAGAACACACACACTGGGTTTTCTTTAGAGAGG
AACACACTCGCACTGGGGCTGGACATGAGTCACTACAGTGATTACAGGACTGGA
AACAAGGACTGAGAAGGGGCAGATGAGTAAGGGTTTTTTAGCCAGAAAAGAAG
CACCTCAGCAGGGTGGCCAGGAGAGGTTGTGCAGGATGTTCACTGTACAAGGAT
40 ACCAGTGGAAGGGTCAAGGGTGGGCTGAGATCCAGAGGAAGGGCTGTGCCTTAT
CTCAAGCCTGATGCCCTGGTGTGCTGAGATGTGTCTGTGGGGTGGGGTGGTGGGGA
AGGGGTGATTCTTTTTCTTAGTCCAAAGATAAATCTGGGCTCCAACCCCTGTCCTT
TGAGGGTGGGACTGTGCAGAAGGAACACCATTTAAAGTTCATATTTTACTGCTGT
GAAGTTACTTGCCCAAGATCACATAGCTGAGGAGTGGCAGTGCCAGATCCAGAC
45 ACTGGTGGTCTGGCCCCAGAGTCCCTGGGCTTAACCACAGCCTGACACTCTCTGT
GCGCAGACAAGGCACACGTGGCCTTGTCTGTGGTTCAGTGGGTTGGGTGTCCGGG
GTGGGTGGAAAAGAGGGCACTTTCCCATGCAGAATGGAATCATCCACCTATGTT
CTCTGGAGGGCTGCAGGCATTTGTCTTTGGAAATCAAGCCTTCCCTGACCTGGAG
GAGAGGGGACATTTTCCTATTGTTAATGATTTGGATCACCAAGGCTCTTACTGAT

CTGCCATATTGGGCTACAGTGAGATGTATTATCCCCATCACAAGGGCATAGCATT
TACTCATTTTTCCACTCATGATGGTAGCCTCTCAGCAAGAGCGTATTATGCATTAG
TCTCTGCGTTAAGACTAGGCCTAAATGGAAGATGCTTGTGCTGTCCATCTCATGG
GAGGTGCCTTTGCCTCGATACAGGGATATTGAGTTCTTAAAATGTTTTAATGAGT
5 ATCCATTAGGTGCTGAGATGCTGAGGTTGAAGGGATGGTCCTGACCCAGGAAG
CTTGGTCAGCAAATGAGAGTAAGGAGTTAGGGAACAATGAAATGCAAACCTTCTC
TTATCCTAGGGCTTTGAGCCTGTGTGTTTTTTTGTGTTGTTTGTGTTTTTAGTT
TAAATTTCCATTTTTTTTTTTTTTGAGATGGAGTTTTTACTCTGTACCCAGGTTGGA
GTGCAGTGGTGTGATCTCGGCTCAATGCAACCTCCACCTCCTGGGTTTAAGCGAT
10 TCTCATGCCTCAGCCTCCCAAGTAGCTGGGGTTACAGGCATGTGCCACCACGCCT
GGCTGAGTTTTGTATTTTAGTACAGACAGGGGTTTTGCCACATTGGCCAGTCTG
GTCTTGAACCTCCTGACCTCAAGTGATCCATCCGCCTCGGCCTCCCAAATTGAGC
CTGTTTTAAATAAAAGCTATATGACCTTTGCCTTAGAGCCTATATTCATTTTTCCC
TCAGAGGAGAAGGAAGCTGATTTTTATAAGCACTTACTGTGTGCCACGAGCTTTG
15 TGCAATCCATCTCATTCAACCTTACCACAGCCTGTAAGGCCGATGTTACTGCTC
CCGTTACAGATGACAACCCAGGGCTCAGCAAACAGAAGTGACTGACCTCTTG
GACTGCGTTCTTGCCACTGCCCCCACTACCCCACTGTACTTTCCTGGCCTTAGAGC
CCTCGGGTCCCTCATGGACAGGCCCCCACTGCCTGGGAAACTCAGAACAGCT
GGAGGGGTTTCTTCTCTGAGGATTCTGGTGTGCGGAGATGGAAGCCAGGAACA
20 GTGGACAGATGGATGAGACATTCTCCTTCTCACGCACTTATCCTACACACTGGTC
ACTCTCAAAGCACACCCCTAGTCACACTCGGGCTCACACTCTCTGCACACATC
GATTTTTTCACGTGCACTTGCACTGCCCTCTGGACTTCTGCAGTCTCCTTCATGAA
GCGGGGATGGGTGGAGCAGGGGCTGCCGGCATTGATGGAAATTGATGATATTTG
AACATCTGTGTGGCAACTCACTCTCCAGCTGTCCCCGCCTCCCCCAACCCACCC
25 CTAAACACACATGCACTGGGGCTGACAGCTATTTCTCTCTCAGCCTCCCTCTCCC
ACCTCTGTCTGCCCCGCTGCCTCTTGTCTAGCTGCTGTCAGGAGCTGACTGCCTCCA
GGGCTGGAATCCTGTGCTCCCTCTGTGCCAGGTAAGGAGGAGTGGCCAGGGG
TTGGGCAGCCTAGTGCCCTCTCTAGACCCACAGAAGAAGGCAAAGTTTTACCAG
GTGAGAGGGCTGTTACCAGCTAGGATGGCAGAAGATTGAGTTTACCAAAGACTG
30 GAGGGGACTTGGTGCTCAGAGGAGGGAAGGATTAGCTTCTCTTAGGCATTAAC
AGATGTCAGATACGAGGGGAAACCACTCAACTGTCTGTCAATATTCACAAGCAG
TCTGGGTGGGAAGATGACACCAGCACGCTTAGAGTAACCTGGCCCAAGGTCACGC
AGCCAGGAAGCTGAGGAGCTGGGATTCAAACCCAGGTCTTGGACTCCACAGCT
TGCACTCTCTGTCCCTTTTTTTTTTTTTTTTCTTAACCTGCCAAAGCCGGACCTTA
35 GCTGCTTGGCTCCTGAGAATCCTGGGAGGCTGGGGGCTGTCTCTATAGAGTTAGA
AGGACTGATCTGGTGGTGCCCAAGGGTGTGGCAGGACTGTGCTCTCTGATCATCC
CCATAGGACTTGATCAGCAGCAGCTGGTCTGCAGGGAATGTTTCAGGGCAGAC
AGCGGGTGGTACTTGGCTATCTGCTGGGAGTGAAGTCCAGCCCCACTGTTGCAG
CTGAGGAACGCTGGGCAAGTTGTTGTTTCTTCTTGAAAAATGGGGTGTCTAG
40 GTTCATTGCAAGAGTAACCTGCTCTGCACATTCTAAAGCCTAGGAAGTATGACCAT
TCTCAGGAAGCACAGGCTCCTCTTCCATCTACCTGCAGGTCTCTAGCTCCAAGGG
GCTCCTCCGCCAGCAGAATTCTAGTTTGATATTCCAGAACCCCACTCTACAAAGG
ACTGTGGTCTCTGGAAGGGAGTGGGTTTTCTCATCCTGGCCAACAGTGTTTTCCCT
AGAAAGATGAGTACTGAAGACCATTGCTCCCCTCTCCCGCTTTTCTTCTCCTCCT
45 CCATCCTCTCTTCTTGGAGTAGGGGTAGAGGAAAGAGCACAGGCTGAGCATGA
AACTTTCTCCTCCACATGTTTGTGCTGTCTGGGTGGCTCTGGGCCAGTTATTTAAC
CACTTGAGGCTCAGTTTTCTCATCTGTAAAATAGGATGGAGTACTAGCACCATT
TTCTAGAGCCAGAAAGACAGCACCTATGTGAAGGACCTACCATAGTACCTGGAG
TGTCATTGGTGCCAGGACACCTGAGTCCCTGTCCCCTGCTACTTGCTCCTACC

TCCTGCATGGAGCCTCATGGAATTCCTCAGCCCTCACTGGTCTTGACCAGCCTC
ACATCAGATGGTCTTTCGGGCTTTCATGAGGATGTAAGCATGCACGTCTTATTT
GTTGGATGAGTGCATGATGGAGTAAGTGAATGAACAGGGGTGGGTTTCCTGGGG
CGGAGAGAGCTGCTGTGGCTGCTCCTGAGAAGGGAGAGATCTTTTGGCCCCACT
5 GGGCCTCCAGAGCCCCATGTGGGAGTTCCTCCTCCCCAGCTCTCCTGGCTCTTATC
TTATTTCTCTCCAACCATCAGAGGAGGGGCTGGTTCCTACTGTTTATGGTCGGCA
CATCTAACCAGCCACCACTGAGTGCGGGGAGCTGCATGGAGGATCTGTAGAGAG
GCAACATCTGGGGGCGCTGTGGATGCTGTGGGAAGGGGCAGCATCTCCATCGCC
CAGGCCAGCAGAATCCTCTTGCCCTAATTGTGGGGCCTCCTTCACCCGCCAGTGC
10 TCTGGGGATGGGAAAAAGGAGTCCTGTGTGGCCTGACCTTGTTCTTTTCTCTGT
GTGATCTTAGACCATTGTCTCCATAATCATCACAATGACACTGATAAAGTGCTTG
CTCTGTGCCAGGCCATGTTCTAAATGCTTTTATGTATTAAACTCACTTAATTCTCC
CAATAACTCTATGAGCTAGGTGATGTTATGACTGACATCCAAGTTTCAGAGGCAG
AAAAAGGCTCGGGAAGGTTAAATGACTTGCCCAAGCACAGCAATGCTGGGATAT
15 TATTCACCCACACCCACCGCCCAATATATTCGTGGGTACATTGGCATCTCCTGG
GCAGGGTCCCCTCCGGGCCTCTCTCTTGGTTCCCCGGTGGCCTCTGCACTTCCAA
CTTAGGCGCCTCCTTCCCTCCACTGCAGAGCCCCACGATGTCGGCCAACGCCACA
CTGAAGCCACTCTGCCCCATCCTGGAGCAGATGAGCCGTCTCCAGAGCCACAGC
AACACCAGCATCCGCTACATCGACCACGCGGCCGTGCTGCTGCACGGGCTGGCCT
20 CGCTGCTGGGCCTGGTGGAGAATGGAGTCATCCTCTTCGTGGTGGGCTGCCGCAT
GCGCCAGACCGTGGTCACCACCTGGGTGCTGCACCTGGCGCTGTCCGACCTGTTG
GCCTCTGCTTCCCTGCCCTTCTTCACCTACTTCTTGGCCGTGGGCCACTCGTGGGA
GCTGGGCACCACCTTCTGCAAACCTGCACTCCTCCATCTTCTTTCTCAACATGTTTCG
CCAGCGGCTTCTGCTCAGCGCCATCAGCCTGGACCGCTGCCTGCAGGTGGTGGC
25 GCCGGTGTGGGCGCAGAACCACCGCACCGTGGCCGCGGCGCACAAAGTCTGCCT
GGTGCTTTGGGCACTAGCGGTGCTCAACACGGTGGCCTATTTTCGTGTTCCGGGAC
ACCATCTCGCGGCTGGACGGGCGCATTATGTGCTACTACAATGTGCTGCTCCTGA
ACCCGGGGCCTGACCGCGATGCCACGTGCAACTCGCGCCAGGCGGCCCTGGCCG
TCAGCAAGTTCCTGCTGGCCTTCTTGGTGCCGCTGGCGATCATCGCCTCGAGCCA
30 CGCGGCCGTGAGCCTGCGGTTGCAGCACCGCGGCCGCGCGGCCAGGCCGCTT
CGTGCGCCTGGTGGCGGCCGTGCTGGCCGCTTTCGCGCTCTGCTGGGGGCCCTAC
CACGTGTTACGCCTGCTGGAGGCGCGGGCGCACGCAAACCCGGGGCTGCGGCCG
CTCGTGTGGCGCGGGCTGCCCTTCGTCACCAGCCTGGCCTTCTTCAACAGCGTGG
CCAACCCGGTGCTCTACGTGCTCACCTGCCCCGACATGCTGCGCAAGCTGCGGCCG
35 CTCGCTGCGCACGGTGCTGGAGAGCGTGCTGGTGGACGACAGCGAGCTGGGTGG
CGCGGGAAGCAGCCGCCGCCGCCGACCTCCTCCACCGCCCGCTCGGCCTCCCCT
TTAGCTCTCTGCAGCCGCCCGGAGGAACCGCGGGGCCCGCGCGTCTCCTCGGCT
GGCTGCTGGGCAGCTGCGCAGCGTCCCCGCAGACGGGCCCCCTGAACCGGGCGC
TGAGCAGCACCTCGAGTTAGAACCCGGGCCACGTAGGGCGGCACTCACACGCGA
40 AAGTATCACCAGGGTGCCGCGGTTCAATTTCGATATCCGGACTCCTGCCGCAGTGA
TCAAAGTCCGAGGGGCGGGACCCAGGCACCTGCATTTTAAAGCGCCCCGGGAGA
CTCTGAATCTTTTTCAGAAACAGTGAGTTAAAGCAGTGCTTCTCAAACCTTGATG
TGCTGTGAATCACCTAGGGGTCTTGTTAAGTGCAGTCTGATCCAGGAGGCCGGG
GCCGGTACTGAGAGTCTGCACTTAACAAGCTCCAGGCCGAGAAGCCAGTGCG
45 GCAGGTTACAGGCGAGGCCTGGAGTAACACAAAGTGAACTCATAATAGACTT
CCCCTCTAGGGCAGTGAGTCGGAAGGGCACACGGGGTGCGTCTCCCCGGAGT
TCAGTTTTACCAGATGATGGGGGAGGGGGGAAGGAGTTTTATGTAAACCATCC
ATGTATTTTGGAGAAGAGAGAGGAAAGGTTTGAGAAGCACTGTTCCAGCCTGC
CCTCTTCATTTAGCCAATGCTTACTGCGCTAGACGCTTCATCCACAATCTTAAGG

GGCAGCTTCTATTAGCCAGTCTTTACAGCTGAGCACATTCTGGCTCAGGGAGGTT
AAGTGA CT TGCCAGTTTCAGGGCTAACGACCACAGGGTCTGCACTCTAACCCCTA
GGCATCACATGCTCAATGACTCTCTGGTGAGCGAGGACATTCTCTGACCTACTCG
AGGGACTTAAGATGCTACCTTGTGACCCAGCACTGCCCAAAGTGCTTCCAAGGCA
5 GAAGCAGCAGGGGATGGCGTGGTCAAGCACTCGGGAAACCTGGGGCTAATCAAA
TCCAATGGGGGAAATGACTAAAAGTCTTCGGTTCGTTAGAAGTTGAATGGGCACA
GCAACTCTAAGACTACAGCACACGTCATTTCTTAGCTAAGCGGACCAGCCTCCCT
GTCGGCCTGGTGTCTGTGGGATCCCTCTGGGCACTGGTAATCCCAAGATCTGTG
CAGCCCCGCTCCAGGCCACATGGGGCTGGGCAGCTACCATTTCCTTTTGCGGA
10 TGGGAGGGGTAACTTGCACCTCTGACCTATCACTTCCACTGCACCCCGTCTCATT
CCTCCACCTGCCGTGGACTTGGGGTCAGAGACTGCTGTGTTTGAGCTCTGCAGCC
CAGGGACCGAAAAGTTGGTGTCAATGAATTTTGCTTGGTGGATGAAATGTCAGTG
GAAGAAGCAGATGAGAACTCTTGAGATCTTGGTCCTGTGTTTTTTCTGCCACCA
AAGGCCAGGGTCACTGAAGGCCTGGCCACAGCAGGTGCTGAGCAAAGGGGAAC
15 AGTGAGGTGCCCAGCTAGCTGCAGAGCCACCCTGTGTTGACACCTCGCCCCTGCT
CCCTCCCATCCCTTCCCCCTTTACTCATAGCACTTCCCCCATTGGACACGTGGTGC
ATTTTGCTTGTTTATTATGTTTTCTCTCCATCAGAATGAAAGCTCCTCGAGGGCAG
GGACTTTGGTCTATTGTCTGTATTTGCCGGTGCCTAGGATTGTGCCTGTATGCAAC
AGGCACTCAATAAATATTTTTGCTGTAGACTGGACAGGCATGAGTTAGATTCTCT
20 GGGGCTTCTGCAGAGACTGGTTTGGGAAAGTGGGTGCTAGGGAAAAGCTCTGCT
CCCTGCAACCTCCCCATTTAATCTTTCAGTATTGAAAAGTGGAGAGGAACCGGA
TTCAGTTTGCTGGGGACAGAGGCAGTGGGGTGTGGAGGTGCTCAGAGCAGCCTT
TGGAAGGTGTGGGGGAAGCTGGATTCCCAACTGTCAGCCTCCAGGCCTGGGAT
GGACCTAGGATGCTGAGAAAGGGCATACTGCTGAGGGAGTCACCTGCCAGTC
25 ACCAGCTCACTGAGGAACCAGAAGAATGTACAGTTCTTGGTTTGAAGGCACTTG
GAGAAGGAGAGGAAGGAGGGATGGGAGCTGAATCTCTTCCCGCCCCCATCTCTG
CCAGGTCCCAGGCCCCCTCTGGGCTTCTGTCCACACAGACCTGCCTGGAAGCCT
TCAAAGGCCGAGGAGCCCCGGTCGGGGTGGGGGTCCCTGTTCTGGAGCCATGGG
TTTGAGGTGCCAGCTCCAGCAGAGGCATCTGAGCAGCGGCCTGAGGTGCTGTGTC
30 TGACATGGTTGTTGGCCATGGAAGGCCTCGGGCCGTCTGAGCTCAGATCTTGGC
TGCCGGCTGCTGGGGCGGCTGCTTCTGCAGCAGGGCCAGGGTGTCCCGCTTCTCA
ATGGAGCGCAGCTGCTTCTTCTTTGCCCGCTTGAGCTTGGCGGGGTTTCGGATCT
GGGGGTGGTATGAGGGGAGGACATTAGTGCGGCTGCAGCCTCGGTCCAAATTCC
CAGGGGAGAGGAAGGCCGCCCCACAGGGGCCTGAGATCGTAGCATGAGAGTGG
35 GGTACATGAGGCAGGGGTCGAGGCCCTGGTTTGCACCCCCAAGTGGGGCAGAA
GGGCAGAGGGGGAACACGAGACACTCACCCTTGGACGACCTCTGCCTTCCGCT
CATTCTCCAGGCGGCGTTTCAGGTTCTCAGCCC GGCGCTGTTTCTTCTCCTGGAAC
ATGTGGGAGAAGGGGATTTGAGTCGGGGAGCAGAGGCAGCCCTGGTCTCTCAGG
CCCCAGAAGAGTGCGAGCGGGCAGAATTCCCAGGAGGAAGGGGAAAGGCCCTC
40 TCTGCCAGGCTCCAGGTTGGTGATGTGTGGGTGGAGGGCTAGCAATCCTGTGCCA
CGGTCTAGTGCCAGGGGCCTGCTGTGGTGGAAGCTCCTGATAGCATGTTGAGAG
GTGGGTATGGGACAGGCAACTGAGGACAGGGGCTGAGACACTGGGGGTGCCAC
CTGGAGATTCACGCACATGCAGACAGTGACCCCTCATGCCACCCTCATCAACTGC
CAAGGGAGAAAGGGGTGCTGGCCCTTCCCCCATTCCCACCCTCTCCGACAGTCTC
45 CCCCTCTTCCCCTGGAGTCCTGCTGCTGCAGAATGCCAGGCTAGGGGTGAGGGCT
GGGTCCCTGAGATTTTCACAGGTGTGGGGCTGGGCAGGGGCTGCACTGCACAGA
AAAGGCTCTGGAGCTATCTGGGCTGGGTTTCAATCTGGATCCTGTTATTTCTCTAA
ACAGGAGACCTTAGCTAAGTCTGTGCCTCAGCTTCTTCATCTTTAAAGTGACAGT
GACCACAGTATCTACCTCGTAAGATAGTTTTGGGAAATCAATGAGGGAATGCAC

GTGCAGGACTTGGAGCAGCCCCTAGCTCCTTGGGCACACTGAGACTCTAGATGG
AGTCTGTCTTGGGAGGGGAAGCCCAGTGCTCTCTAGCCATGCTGACTGTGTCCCT
CAGCAAGGCCAGGGTGGGGACGTCAGCTCCAAGGCTGCTGCATGGTTAGGAGTC
TCTGCTGGCTTTGGTGACTTGGGGTAGCAGGGGTGGCCCAGGCCCTGGGGAGG
5 AAGGAGAAGTGAGCCTTGGCCTCCTGTGGTCAGGGCAGGCCCGGGCTGGGGGCT
GGGCAGGAGCACCTCCGCAGTGGACGGTGAGAAGTGAGACGGCAGCTCTGTCTT
GCCCCAAGAGGGAGCCAGGGCCACACAGGAAAAGAGATAAGGCCTCAGCATATG
GTGGCGGACACACTGTTCTCAGATGTCAGCTGTAAGCTGAGCTGGGGTGACTTA
GAGCAGGGGACAGATGACTGAGTGACTGGCCCCACCCCTTTTCTCAGTGGCCAGC
10 CTGGGACCACGGACTATGGATGAGTTGTCTGAATCCCGTTCGGCACTCCTCCTAC
ACGCCTGGGTTCATTAGAGGAGTGGAGGAGGAATCTCCCACTGACTGCCCTGCCCT
GGGGGGCAGGAGCTGACCAATGCCACTCCGCTTTCTCTGCATGCTGCCTGCTGAG
TGCCCTCTTCCCCCGCTTAAAAGTCCCTGGCAGATGTGGGTGAGGCTGTGACCC
TTTACAGGGGGCTTCTGGCTCTGGGATGGGTGACAGGGGACAGAAAGTGAGGAA
15 AGGTGCGGGGGCCATCCACGTTGCTGGTGTGTGGGCTGCTTCTTGGAGAATGACA
GCAGCCATACCGGGGACATGGAGTTCAAATCTGCAAGCCCTTCCCAACTGAGTA
CGTCCCAGCAAAGGGGCCCTCGACCCCATCTCACTGACTGCCCTACCACCCAGGAC
TTCCTCCCGGGCTTCTCCCCAAGGCCCGCTTCTGGTCCTCCCCCTCCGTCCCTGTC
CCTGAGGCTCTTTCAGCAGCCCAGGCTAAACTGTATGGTCCCCTGGGCCTCCCTG
20 CCCTGTAGTCCCAGATTGCACTTCTGCTTCTGGCCAGGTGCCCTTCCCTCCCTCCGG
CCTTCAGATTCAAGAACGTTTTTTAACCAAGTCGGCCTCCCCCAGGCACCCGTGG
AGGCCCTCGCCTCAGGTCTGTACCAGTAGACACTAGCTTAGTCCTCTGAGCCCCA
GCCTCAGCCTGGCTGGCCCCCTCACCTGGCGGCGCCTCTCCTTCTCCTCCTCCAGGT
GACGGGCAAAGTCTTGGCCAGCTTCTCTCCTGTCTGTTCTTTCATCTTCCGCTGC
25 CACGATGTGCGCAGGGGCTTGTCTGAAGCATCTGGGAGAATCTGAAAGGGGGA
GAGTGGGTGCATACAGGGTCTGTGGGGCAAGCGCCACCCATGCCCTGTCTCCTCT
CGGCCGGAGGCTCTGGACCTTCTTCCCCAGAGCCCAGGCAGAACCCACCTCCTTGC
TGGCCTGACAGGCGGCCTTCCAGGGCTGCAGAAACTTGGGGCGGGAGGGAACCC
TGATCGTGCTGGCTGCCATTTCTCAAGCCTTGGCTACATGCCTCTGAGGTGGGTA
30 CTCCTATCCTCTCCACTTACAGAGGAGCAGGCCAAGGCGCGGAGAGGTTAAATA
GCTGCCTAAAGATACCTTGTGGCAGTCAGGACTTGAATCCTGTCAGCGACTGCAG
AGTCCAGGCTACGCGGCCCTGCTGTAAAGTTCTGTTGCTTCCGCCAAGTGCATT
TGGCCCGGGTGTGAATGCCTCTGGAGGCGGGGCGCTACCCCCCTAGGGAGGTGG
CCCATTCCATTTCAGAACAGTGTGAGTGGTTAAAGTTCTGGGTAATGATTCAGGA
35 TCTTCCCCGCCAAGACCGGATGCAGTGGTCATGCTTGTAATCCCAGCACTTTGGG
AGGCCAAGGTGGGCAGACCACGTGAGTCCAGGAGTTGGAGACCAGCCGGGCAA
ACATGGCAAAACCTACTAAGCCTACTAAAACCTACTAAAGTTTCTACTAAAAATA
CAAAAATTAGCTGGGTGTGATGGTGTATGCCTATAGTCCCAGCTACTTGGGAGGC
TGAGGTACAACAATTGCTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCCGAGAT
40 CGCGCCACTGCACTCCAGCCTGGGTGACAGAGCAAGACTCTGTCTCAAAAAAAA
AAAAGAAAAAAGAAAAAAGAAAAAGAATCTCTTCCCCCAGTTGGAGATGAAGT
GGGCATCAGGGCTCTCAGGGAAATCTGAAAAGAGCAACGATGATTTTAGAGTTA
CAGGAGAAGTGAAGTCTCTGTAAAAATGCATACTACAAGGATTTATGAATG
GGATGATATGTCTAGGATGTACTTTAAAAATATTTTCAGGGAAAAAAAATGCCAA
45 AGATCAGCCGGGCGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTG
AGGTGGGCCGATCACCTAAGGTGCGGAGTTCGAGACCAGCTTGACCAACATGGA
GAAACCCTGTCTCTACTAAAAATACAAAATTAGCTGGGTGTGGTGGCACACACCT
GTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGG
CGGAGGTTGCGGTGAGCCGAGATTGCTCCATTGCACTCTGGCCTGGGCAACAAG

AATGAAACTCCGTCTCAAAACAAAAAAGAAAAAAGAAAAAAGCCAAG
TATCAAAGATGAAGCTACACTAGTAAATGCTGAGCTGTGTTGATGCTGATAATG
GGGACTTGAGAGCTTTGCTCTTTCTTTGTATGCTTGAAAATTTCCATTCAAAAAA
GTAAAAACAAAATGCAAAGAAGTCTCTCGGTGGCCTCCACATGCTGAAATTAGG
5 TCTTTCTCTTTTAAAGATTCAAGGCCCATTTTGGTGTCCCTTGGCCCTGCCGACTT
CTGGCCCCAGCTCCCTGATTTCTTCTCCCCTTCCCAAGGCCTTGCCACTGAAGGC
CTGGCCTCCTAAGCACTAAGAATGGGGTGCCACATGGACTTCCCCCATAACTGTA
AAGCTGGGCTTCCCAAGCTGGGGTACGAGAACCCTGAAGGGACAAGGTGTTGGG
AGCCTAGAGACACACAGAACCACAAGACACAGTGCTGCATCTGTGTAGAGCAGG
10 GCTGTCAAACAGAACGTTCTGTGATGGTGGAAACATTCCACATTGACACTGTCCA
ATAAGGTAGCCACTAGTCATGGGTGGCTGCTGAGCGCTAGAAATGTGGTTGGTGT
TGATAGAGAACTGAATCTTAAATTTTATTTAATTTTAATTAATTTAAATGTACAT
AGCCACATGTGGCTGGCGGCTAAGGTACTGAGGCAGGGCAGTTCCAGACCATTG
GTTCTACCTGGGTATTGAGGAACTCAGGCCTGGGTTCCAAGTCCAACCTGGGTG
15 ACCTGGAGCAAGGTAGCCTCTCTAAGTCTCAGCATCCTGTCCAGTGAGATGAGA
ATCATTCCTAACCCTAAGGGTGGTGGGAGATTTAATCGACACACACACGTAATA
GGTGCTCCATAAATGCTACTCCTCAGAGAAGGCAGACAGCATGCCCAAGGGCAC
TATGGAGAAAGTGGCGTTTGGCATGAGCACGAAGACAGGGCTGCAGCCAGGTCT
CCCTCACCACATACACTTCCCAGCTGCGGCTGTCTTCTCCTCCCTGCAGCAGGAGC
20 TGCTTCCCACCCATCTCCAGGCTCACTTACTACCCACCGAAGCTGCTCCCTCAA
GATCCCAAACATCCATTCAAGTGGCCCTGCTGGGCCCTCGCCACAGACTTGCCTG
CAGCTTCGGAAGCTGTTTTAGTTCTCTTGAGACAGCCTCCTTGTGGGTTTTCTGC
CTTACCCCTGCCCGCCTATGTCTGTGTTCAAGTAGCCAGGCTGATCTCACAAGTC
AGGTCATTTTCTTCTTTGCTTGACACCCTTCCATGGCTCCCAAGCTCACTCAGGA
25 AAGCCGGGAGTCCCTGTAAGGGTCAACCAGGTCTGCTGTCTCTGACCTCATCT
CCTACTGTTCCCCTTCTCCCCCTCATTCCAGCAGCGAGACCTCTGGAAAGCCTCTC
AAACGGGAGCTTGCTCCCGCCTCAATACCTCTGAACATCCCTTTCCTGTTGCCTG
GATACTGTTTCCCCAGATCTCTGCCCGGCTCCCTCTGCTCAGACCTGTTTATCTGC
AAGGCCATCTCTGAGCACTGTGGCAATACCCTGCCCTCCCTGTTATTCTCTGGTCC
30 CCATCCTGGTTTATTTTCTTTGAAGTCTTTATTACTGACATATCATGTGTGTA
GTTCTTTATCTGTTTCCCACATTTAGAATGTTTGCTTCAGGAGAGCAGAGACTTTT
TGTTACAGACATGTTTACCCAAGATCTGAGCAACTGGTTGATGAATGAATGAAC
TACCTTCTGTCTCAATTCATCCACTTGTTCAAGCTTAGTGCCCTACCCTGCACTGG
GCTCTGGGGCATCTAGTCATGATAGGTAAGTCCCCACTCTTACACTCTCACGGAG
35 CCTCCGGTTTAAAGGAAAACAGGCAGTCAATAAGAATCACAAATAAATAAGCAT
TTGTGCAAATGGAGGTGTTACAAAAGAGAAGTACAGCACACAATGATAACATAA
AGCATGGGGACTTAACCCTAGTTGGATAAGCCAGAGAGGCTTTTCAGAGGAGGT
GACATTTGAACTGAGCCCTGAAACATGAGTGGGGGACTGGCCAGGGAAAGAGCC
TTTCAAACAGTGGGAACAGCACGTGTGAAGGCGCTGAGGAAGGAGGGAGCGTCA
40 CACATGGGAGGAACATGGAGGGGACAACAGTGTGGAAGCTCTAGTGATGGAGG
GGAGAGGAGGGTGGGCCTGCCGGCCTCATTAAAGGAGTCTGGAGTGCATGCTCTG
AGTGAGCAACAGTGAGTCAGGACGGGTCTGCAGTTGGGCAGGGAGCTGGAACCA
CACACCCTCTCTCCAGACTTCTTGGTCAAGTGATCTGTGGCCTCCTACTCTGCTCC
AGCTGCTGATCCTGTGTCTTGTGTGGGCCCTCCCTTCTCCCCACCTCTGCATGGG
45 CCCAGCCCCCTCTAGCTCAGCAAGCCCATCTCCCCACCTGCAGCGTGAGTACCAG
GACCCCAAGCTTCACCCGCTCAACTTGCTCATCACCCCTCTTCCCACCTGAACCAG
CCTCCTCCAGTTCCACATGGCCATCAACGGCCCTGCCATTCTCCTGTGACCCCTG
GGACAGGGCAGAGGGGTAGTGCCATCATCCACTTCTCCAACAGTTACAGTCACTC
TAGCCTCAAAGTCTCTCCCATGGGAGACTTGACGTAAATTAATCTGTAAAGCCTCA

GTTTCTTCTGTTTCATCAGGGGTGGGGGGATAATATCCACAGCCTAGGGTTTTAA
GGATACAAGAAAAGGGCCTAGCACGAAGCCTGGCACAGAGTCAGCTTCTTCCTT
AAAAACACCCTCCTTCCTCATGGTCCCTCACAGGCATACATCCCTGACTCTCCCCCT
GTGGTTCCCATTAGCTCGAATTGGAAGTGAATCCCACACCTCTCCTTCATGGCAG
5 CCTACACTCTTCCTTCTTCAGATGAGCTACTTCGTTTCCTTCATTAAATAAGCATTC
ATTGGGCATTTACTATGCCCTTGGCACAGAAAGACAAGAAAGATCTCGTGCCTGC
CCCTTAAGAAGGTCGCAATCCAATTCAAGGTGGATCTACAGGGATTGGGTAAAG
GGGTTTTTTGCACACAGGCTTCGGAATCAGATCTGTGCTCAGGTCCTGTGCCTAC
CACTCATTTAGCCTTGGTTTCCTCACACAAAAAACAGGAATAATAACACCGCCTG
10 CTTACAGGGCTGACGTGCAGATTAAGCGTGATGACACATGCTGTTCCATGTTTG
AAAGGCTGTTGACTGGTAAATCCTTATTAAGGCTGTTGACTGGTAAATCCTTATA
TAATCAGTGCTCAGTAATACTTTTTATCTTAAAGGCAAATAACTGTAATAGACTA
TATTGGATGAAGACCTCACTGCTTTGATCAAGTAATGGCTGGTTTACTTGCTTCTG
CTTCTCTCACTAGAGAGGGCAGACAACGGTAAATGTCTGTTGAACGAATACAGA
15 CCTGAGGTGCTACAGGAGAGGCCCATAGGGACCCTGAGGAGGAAAGGCATCAG
AGAAATTGATCTTTGAGGGCCTGGCCCCACCCTCTCCGGGATCCCAGGGCATT
ACCACATTCTGATTGTAATTACCTGTTTGCTAACATCCCCACTAACGTGAGCTCTC
TCTAACCCCTGGGGCTATTCTCCAGGCTGCAGCAGGGCAAAGGCGGGGTCCCAAC
ACCATAGAGAACGCCACCCCTGTCCATGCTGTCCCCCACTTCACCTTTTCTTGGA
20 GCGGTCCTTCCACACTCGCCCCGATTTGGGCTTCCCCTTCGGGATTACAGGAAGC
TCCTCTTTATTCAACTTCTTGACGCTGGGGCCTGGGATGAAGAACCTTTTCGCTT
CTTTGCCCCGAAGCCGCCTGTCACCGTCTCCCCAGCTGGAGGTGGCTTGCTCGGC
TCATGCTGACCCCGGGGGGAGCCAGGTGCCCTGGGTGTCAGCTCCAGTAGTGGCT
GAGAGGGCTCCGGACCGGGAGCTTGCTGACCGGGGTAAAGGCTCTGGTGATCCTG
25 GGACCGGCGGTAGCTGATGCTGGGGGGCCCCCGGGGTCAGCTCCTCCTTATTCTG
GGCCAACTCCGAGGCCAGTACTCCCTGGTCCCTGAGAACACTTTGGTGCCTCCTCA
CTTGGCTTCGGCTGACATCGTGGGGATTACAGGACTGTA CTGCTGGCTGTCTTTGAG
GCGACTCCAGGTGTAGGTCTTGCTGACGCTGGGGGGACGCTGCGCCTGGCTCTGG
CTGCCCTTGGGGTGACTCCAAGCCTGCACCCTGCTGCAGACGGGGTGATCCTGGG
30 CTTGTCTTCGGCGGCCTTTTCGGGGGACCCAGGCCAGCCCGCTGCACACTCGGAG
GAGACCCGGGCTCCCTCGTTTCTTCTGGGTTGCTGACTCGAACTCCACAAGGGCCCG
TCTCGTCCGCGAAACTGAGGTGAGGCTCTCGGGGGATTTCGGGCCTTAGGCCTCCC
AGCCGTCGGCTGCGCCTTAACGGTGTATCCATGGCTCAGCCGGTAAGTTTCCACA
CCCCTGCGCACGTGCAGCCCCCGCCGAAACCGGCGCCTTCCTATGACGTCAGGAG
35 TCGCCGCGTCCGTGACGCACAGGAGGGGGGCTGTTGCTGAGGCGGCCATGTTGG
TGAGGGGTGGAGAGGCGGGACCGGGGTTGGGGAGAGTGGGGCTCAGCATGCGC
GTGCGCAATTTCGCGCAGCGCAGTCAACATGTGATTGATGAGCCAGTCTTTTTCC
TGGGATTTCGCTTTTGCCTTTCTTGCAAAGTTTCTGGGGAAAGAAGAGCGAGCAA
GTAGAAAAGGGAAAGTGGGAGGACCCATTTACAGGGAGAGAACAGAGTCGAAAA
40 AAGGTCCGAGGAGCCCATAGGCAAGGCCAGTGATGTTTTGCAGCCAACTCCG
GTGCAGTTGGGCAGAGTCCTGCCCTCCTTGGGCCTGTTTTCTCATTTGTAATAGGG
GTCATTTTGCCTAGCTTCGTGCATCCCAAATGATCCTGTCAGAGTCCTCCTCCCA
CCTACCTGAGGGACTGCTACCTGGGGGTCCTGGAGGTGGAAGATCGGTCTTTTCT
GTGTTAATTGTTACACTCTTGATTCTTCCGTCCTGTGCTTCCGTATATAATCCAT
45 AGCTCTCCCTCCCTTTTCAGCGTTTTCAACGTTTGTGAGTGAAGTTGAGGTACCAA
TAAGATGCACCACCTTTGTCCTGTGGCTCACCTGGGCCCTCGACCAGCTGCATAT
CCTCCCACGTCCCTCTTCTTCTGCCCCAGTTCTAGAAACGGGTGGATCATCTCCG
ATCTTCCTTTACGCCAGACAGTGGTTTTTGCTCGTGTGTGAACCTGCTTCGCCTC
CCCTCCCTTCCCTTGCTATTACCTGTAAATGTACTTTGCTTACTAAGCACTTTGG

GACCTCACCAGTGAGCAGGTGTTGACTTCTGGACCTCCCGAGGCCTAGAGAAGA
CTCTCGGGATGTGGGGTTGGGGAATGTGGGGCTGTGGAGACTTTCGTGTGAGACC
TAGGAGTGGGGCTTTGATTTACTTACAGCATGCTTCTTAGGAAGAACATCTTGGA
AGTGGCCCAGTTGTGTAATTCTTGGAAGTGCCTGGGGTTGGCCATTAAAGGTCCC
5 AGGGCCCCGTCTGACATTCCAGTGGTTTCTTTTAGAAACCATTTGTTTCTCCAGCTG
CGGGCTTGTGAGAGGGCCTGGGAAATTGTCCAAGAATATCAGGGATCAGAGTGT
CCTCATCTTCCTCATGTTCTGAGTCAAGGAGACCCCTGCAGGGGGGCTTTGCCT
GCCTCACTGCTCCTCTCCGGCCATGCAGCTGTCCACAGCAGAAGCAGCCGGGACA
CCTCCTTGCCCAGCTCTTCCACCCCCCAACTGTCAGAGGAGTGAGTTCCATTAG
10 TTCCTTAAATGCCCTGCCCTGCCTGGAGACCCCAATGATCTGACACTCAGAACC
AAGCCCGGCAGGTGTTGCCAGAGTGCTGGAGGAGACTGTATGCCCTCTGCCCTG
CTCCAGTCCCCCTTGGCTTGCCTTGCCTCCTAAGCTCTTGTCCTCCAGCTGGAGGGA
TCACTCTCCAGTGCCGATTGGATCATATCCTAGTCTAGCCTGAAATACTTCAGAG
GGTGATCTCAGGTTTTACCCAGAGAGAGGGGAGATGTGTTTTAGAGGAGGCCTTTG
15 GGTGGCCCCCAGACATTTGGAGGGCACTTTGTCAACCTCAGCATCAGATGGGCTCT
GGCCCAGAACCCCTACTCCACATGAGCTCAATTTGTCAATTGTCATTATACATG
GTGTGCAGAGGGCCAGAGGAGACTCCTGAAATTTTCAGAAGAGCCTGGTGTGGC
GATCGCTGTTGGGACCCTGTCTCCTTACACTCCTTTGCTTTCTTTTAAAAATTATT
ATTATTTTGTGAGACAGGGTCTTGCTCTGTTGTCCAGGCTGGAGTGCAGTGGCACA
20 ATCACAGCTCACTGCAGCCTTGACCTCCAGGCCCCAGGGATCCTCCACCTGAG
TAGCTGGCACCACAGGCTCATGCCACCATGCCTGGCTATTTTTTTTTTTTGTAGA
AACGGGGTCTCCCTGTGTTGCTCAGGCTGGTCTTGAACCTCTGGGCTCAAGTGAT
CCTCCTGCCTCGGCCTCCTGAAGTGTTGGGATTACAGGCGTGAGCCACTGTGCCT
GGCCACTCCTTTGCTTTTATTGCAGCTTTCTACATCACAGCTTTCTTGCTTTAGGT
25 GGTAGGATACTGAGGGGCTTCTCTGTAGCCCCCAGAGGCCACCAACAGGATTGA
ACTTGCATTGCCACAAAGGTAATCTGCTCATGGACCCTCTTTTGGCTTCATCTCT
GTCTCACTTCCCCACTTTCTTATAGATGCTTGCTGAGGTCATTCTCAGAGCAGACA
AATATTGTACTTAATCCTCTTCTCAGAGTTGGCTTCTGCAGAAACCTAGCCTGAA
ACATTGGTGCCAGCAATGATTGGTCCAGGCATTGTTTCAAGTACTCTCCAAGTAC
30 AAATCCATTTCTTAATGCTTCTCCCAACAATCCTGTGAGGCAGGTGCAGTTGTTAT
TACTCCCAGTTTACAGATAAAGAACTGAGAGGCTGGGTGCGCTGGCTCACACCT
GTAGTAATCCCAGTACTTTGGGAGGCCAAGGTGGGCGGATCACTGGAGGCCAGG
AGTTCAAGACCAGCCTGGCCAACATGATGAAACCCCATCTCTACTAAAAGTACA
AAAATTAGCTGGGTGTGGTGGCAGGCGCCTCGAGTCCCAGCTACTCAGGAGGCT
35 GAGGCAGGGGAATTGCTTGAACCTGGGAGGTAGAGGTTGCAGTGAACCAAGATC
GTGCCACTGCACAGCAACCTGGGTGGCAGAGCAAGACTCTGTCTCAAAAAAAAAA
AAAAAAAAAGACTGAGGCACAGAGAGGCTGAGACACTTGTAAGGTACACACAGCA
AATAAGTGGTAGAGGCAAGATCCACACCTAGACTGTCTGATTCCAGAGCCACAA
CTCTTAACAGTAAATCTGCCTGTTATCCAGGCAAGGAATCAGGCATGGGAAGGCT
40 AAGGTGCTTGCCAAAATCAGACAGCGGCACATTCAGGAGCCAGGATTGTGGTT
CCAGAGGTGGCATGCTTAGCTGCCTTGCACTGCCCCACATGGGCCTTGCTCAC
CTATTCGTCACTGATTCTGGTCTGTGTGCTGGGAGGAGGTGGGTACCACCTGG
CACACACCATCGTGCAGAATGTGCCGAATCAGCAATACCAGTTTATTTATGTAAC
CTGAGATCTGCTGACTGATGGAAACCAAGCGCTGGCAGATGGATGGAAGATAGG
45 ATCAGGTGTTCTCCTCTGAGTCATTGACCTCCCCCAGCTAAGGGGTGCTACAGT
TGAGAGGGTCTGACAGTCCCCAGATGTCAGAGACCTGGGTCCCCATGGCTTTCTG
TTCAACACCTAGCCTTGCTGAAATACTTCAGAGGGTGATCTCAGGTTTTACCA
GAGAGAGGGAGATGTGTTTTAGAGGAGGCCTTTGGGTGGCCCCCAGACACTTGG
AGACACTTTGTCAACCTCAGCATCAGGTGGGCTCTGGCCCAGAACCCCTACTCC

CACCTGAGCTCAGTTTGTGATTGTCATTATACATGGTGTGCAGAGGCCAGAGGA
GACTCCTGAAATTTTCAGAAGAGCCTGGTGTGGTGGTGTACTTGCAGAGTGCTTG
AAACAATGCCTGGACCAATCATTGCTTGCCCCGGTGTTCAGGCTGTGTTTCTCC
AGAAGCCAACTCTGAGAGAAGGGCAGGGAAAGGGCCCCCTGGCGGTTCATCAGCA
5 GCATTAAGTGAAGCACTTACCACGCGCCAGACCTCTTCTGGGTGCTCCTGTGCTCC
CCAGAGCTCCGGTTCGGGAGGGTGATTTTCAGCAGGAGCACGGTACTTGATATGT
ATTTGTTGAATGAAT

SEQ ID NO: 128

10 >gi|2570128|dbj|AB000714.1|AB000714 Homo sapiens hRVP1 mRNA for RVP1, complete
cds
AATTCGGCACGAGGGCAGGTGCAGGCGCACGCGGCGAGAGCGTATGGAGCCGA
GCCGTTAGCGCGCGCCGTCGGTGAGTCAGTCCGTCCGTCCGTCCGTCCGTCCGGG
CGCCGCAGCTCCCGCCAGGCCAGCGGCCCGGCCCTCGTCTCCCCGCACCCGG
15 AGCCACCCGGTGGAGCGGGCCTTGCCGCGGCAGCCATGTCCATGGGCCTGGAGA
TCACGGGACACGCGCTGGCCGTGCTGGGCTGGCTGGGCACCATCGTGTGCTGCGC
GTTGCCCATGTGGCGCGTGTGCGCCTTCATCGGCAGCAACATCATCACGTGCGAG
AACATCTGGGAGGGCCTGTGGATGAACTGCGTGGTGCAGAGCACCGGCCAGATG
CAGTGCAAGGTGTACGACTCGCTGCTGGCACTGCCACAGGACCTTCAGGCGGCC
20 CGCGCCCTCATCGTGGTGGCCATCCTGCTGGCCGCCTTCGGGCTGCTAGTGGCGC
TGGTGGGCGCCAGTGCACCAACTGCGTGCAGGACGACACGGCCAAGGCCAAGA
TCACCATCGTGGCAGGCGTGCTGTTCTTCTCGCCGCCCTGCTCACCTCGTGCCG
GTGTCCTGGTTCGGCCAACACCATTATCCGGGACTTCTACAACCCCGTGGTGCCCG
AGGCGCAGAAGCGCGAGATGGGCGCGGGCCTGTACGTGGGCTGGGCGGCCGCG
25 GCGCTGCAGCTGCTGGGGGGCGCGCTGCTCTGCTGCTCGTGTCCCCACGCGAGA
AGAAGTACACGGCCACCAAGGTCGTCTACTCCGCGCCGCGCTCCACCGGCCCGG
GAGCCAGCCTGGGCACAGGCTACGACCGCAAGGACTACGTCTAAGGGACAGACG
CAGGGAGACCCACCACCACCACCACCACCAACACCACCACCACCACCGCGAGC
TGGAGCGCGCACCAAGGCCATCCAGCGTGCAGCCTTGCCCTCGGAGGCCAGCCAC
30 CCCCAGAAGCCAGGAAGCCCCCGCGCTGGACTGGGGCAGCTTCCCCAGCAGCCA
CGGCTTTGCGGGCCGGGCAGTCGACTTCGGGGCCCAGGGACCAACCTGCATGGA
CTGTGAAACCTCACCTTCTGGAGCACGGGGCCTGGGTGACCGCCAATACTTGAC
CACCCCGTCGAGCCCCATCGGGCCGCTGCCCCCATGTCGCGCTGGGCAGGGACC
GGCAGCCCTGGAAGGGGCACTTGATATTTTCAATAAAAGCCTCTCGTTTATAGC
35

SEQ ID NO: 129

>gi|1563888|gb|U66199.1|HSU66199 Human fibroblast growth factor homologous factor 3
(FHF-3) mRNA, complete cds
ATGGCGGCGCTGGCCAGTAGCCTGATCCGGCAGAAGCGGGAGGTCCGCGAGCCC
40 GGGGGCAGCCGGCCGGTGTGCGGCGCAGCGGCGCGTGTGTCCCCGCGGCACCAAG
TCCCTTTGCCAGAAGCAGCTCCTCATCCTGCTGTCCAAGGTGCGACTGTGCGGGG
GGCGGCCCGCGCGGCCGGACCGCGGCCCGGAGCCTCAGCTCAAAGGCATCGTCA
CCAAACTGTTCTGCCGCCAGGGTTTCTACCTCCAGGCGAATCCCGACGGAAGCAT
CCAGGGCACCCAGAGGATACCAGCTCCTTCACCCACTTCAACCTGATCCCTGTG
45 GGCCTCCGTGTGGTACCATCCAGAGCGCCAAGCTGGGTCACTACATGGCCATGA
ATGCTGAGGGACTGCTCTACAGTTCGCCGCATTTACAGCTGAGTGTGCTTTAA
GGAGTGTGTCTTTGAGAATTACTACGTCCTGTACGCCTCTGCTCTCTACCGCCAGC
GTCGTTCTGGCCGGGCCTGGTACCTCGGCCTGGACAAGGAGGGCCAGGTCATGA
AGGGAAACCGAGTTAAGAAGACCAAGGCAGCTGCCCACTTTCTGCCCAAGCTCC

TGGAGGTGGCCATGTACCAGGAGCCTTCTCTCCACAGTGTCCCCGAGGCCTCCCC
TTCCAGTCCCCCTGCCCCCTGA

SEQ ID NO: 130

5 >gi|1689891|gb|AA133129.1|AA133129 zm25d01.s1 Stratagene pancreas (#937208) Homo
sapiens cDNA clone IMAGE:526657 3' similar to TR:G992563 G992563 ELONGIN A. ;,
mRNA sequence
ACCCCAGGAAGAAGAAGAAGCTGGATTTACTGGGCGCAGAATGAATTCCAAGAT
GCAGGTGTATTCTGGTTCCAAGTGTGCCTATCTCCCTAAAATGATGACCTTGCAC
10 CAGCAATGCATCCGAGTACTTAAAAACAACATCGATTCAATCTTTGAAGTGGGA
GGAGTCCCATACTCTGTTCTTGAACCCGTTTTGGAGAGGTGTACACCTGATCAGC
TGTATCGCATAGAGGAATACCAATCATGTATTAATTGAAGAAACAGATCAATTAT
GGAAAGTTCATTGTCACCGAGACTTTAAGGAAGAAAGACCCGAAGAGTATGAGT
CGTGGCGAGAGATGTACCTGCGGCTTCAGGACGCCCCGAGAGCAGCGGCTACGA
15 GGTACTAACAAAGAATATCCAGTTCGCACATGGCCAATTA

SEQ ID NO: 131

>gi|186385|gb|M63099.1|HUMILRA Human interleukin 1 receptor antagonist (IL1RN) gene,
complete cds
20 ATGGAAATCTGCAGAGGCCTCCGCAGTCACCTAATCACTCTCCTCCTCTTCCTGTT
CCATTCAGAGACGATCTGCCGACCCTCTGGGAGAAAATCCAGCAAGATGCAAGC
CTTCAGAATCTGGGATGTAAACCAGAAGACCTTCTATCTGAGGAACAACCAACTA
GTTGCTGGATACTTGCAAGGACCAAATGTCAATTTAGAAGAAAAGATAGATGTG
GTACCCATTGAGCCTCATGCTCTGTTCTTGGGAATCCATGGAGGGAAGATGTGCC
25 TGTCTGTGTCAAGTCTGGTGTATGAGACCAGACTCCAGCTGGAGGCAGTTAACAT
CACTGACCTGAGCGAGAACAGAAAGCAGGACAAGCGCTTCGCCTTCATCCGCTC
AGACAGCGGCCCCACCACCAGTTTTGAGTCTGCCGCCTGCCCCGGTTGGTTCCTC
TGCACAGCGATGGAAGCTGACCAGCCCGTCAGCCTCACCAATATGCCTGACGAA
GGCGTCATGGTCACCAAATTCTACTTCCAGGAGGACGAGTAG
30

SEQ ID NO: 132

>gi|186738|gb|M60828.1|HUMKGF Human keratinocyte growth factor mRNA, complete cds
ACGCGCTCACACACAGAGAGAAAATCCTTCTGCCTGTTGATTTATGGAAACAATT
ATGATTCTGCTGGAGAACTTTTCAGCTGAGAAATAGTTTGTAGCTACAGTAGAAA
35 GGCTCAAGTTGCACCAGGCAGACAACAGACATGGAATTCTTATATATCCAGCTGT
TAGCAACAAAACAAAAGTCAAATAGCAAACAGCGTCACAGCAACTGAACCTTACT
ACGAACCTGTTTTTATGAGGATTTATCAACAGAGTTATTTAAGGAGGAATCCTGTG
TTGTTATCAGGAATAAAAGGATAAGGCTAACAATTTGGAAAGAGCAAGTACTC
TTTCTTAAATCAATCTACAATTCACAGATAGGAAGAGGTCAATGACCTAGGAGTA
40 ACAATCAACTCAAGATTCATTTTCATTATGTTATTCATGAACACCCGGAGCACTA
CACTATAATGCACAAATGGATACTGACATGGATCCTGCCAACTTTGCTCTACAGA
TCATGCTTTCACATTATCTGTCTAGTGGGTACTATATCTTTAGCTTGCAATGACAT
GACTCCAGAGCAAATGGCTACAAATGTGAACTGTTCCAGCCCTGAGCGACACAC
AAGAAGTTATGATTACATGGAAGGAGGGGATATAAGAGTGAGAAGACTCTTCTG
45 TCGAACACAGTGGTACCTGAGGATCGATAAAAGAGGCAAAGTAAAAGGGACCC
AAGAGATGAAGAATAATTACAATATCATGGAAATCAGGACAGTGGCAGTTGGAA
TTGTGGCAATCAAAGGGGTGGAAAGTGAATTCTATCTTGCAATGAACAAGGAAG
GAAAACCTCTATGCAAAGAAAGAATGCAATGAAGATTGTAACCTCAAAGAACTAA
TTCTGGAAAACCAATTACAACACATATGCATCAGCTAAATGGACACACAACGGAG

GGGAAATGTTTGTTCCTTAAATCAAAAGGGGATTCTGTAAGAGGAAAAAAAAA
CGAAGAAAGAACAAAAACAGCCCACTTTCTTCTATGGCAATAACTTAATTGC
ATATGGTATATAAAGAACCCAGTTCCAGCAGGGAGATTTCTTTAAGTGGACTGTT
TTCTTTCTTCTCAAAATTTTCTTTCTTTTATTTTTTAGTAATCAAGAAAGGCTGGA
5 AAAACTACTGAAAACTGATCAAGCTGGACTTGTGCATTTATGTTTGTTTTAAGA
CACTGCATTAAAGAAAGATTTGAAAAGTATACACAAAAATCAGATTTAGTAACT
AAAGGTTGTAAAAAATTGTAAACTGGTTGTACAATCATGATGTTAGTAACAGTA
ATTTTTTTCTTAAATTAATTTACCCTTAAGAGTATGTTAGATTTGATTATCTGATA
ATGATTATTTAAATATTCCTATCTGCTTATAAAATGGCTGCTATAATAATAAAT
10 ACAGATGTTGTTATATAAGGTATATCAGACCTACAGGCTTCTGGCAGGATTTGTC
AGATAATCAAGCCACACTAACTATGGAAAATGAGCAGCATTTTAAATGCTTTCTA
GTGAAAAATTATAATCTACTTAACTCTAATCAGAAAAAAATTCTCAAAAAAA
CTATTATGAAAGTCAATAAAATAGATAATTTAACAAAAGTACAGGATTAGAACA
TGCTTATACCTATAAATAAGAACAAAATTTCTAATGCTGCTCAAGTGGAAAGGGT
15 ATTGCTAAAAGGATGTTTCCAAAAATCTTGTATATAAGATAGCAACAGTGATTGA
TGATAATACTGTACTTCATCTTACTTGCCACAAAATAACATTTTATAAATCCTCAA
AGTAAAATTGAGAAATCTTTAAGTTTTTTTCAAGTAACATAATCTATCTTTGTATA
ATTCATATTTGGGAATATGGCTTTTAATAATGTTCTTCCCACAAATAATCATGCTT
TTTTCTATGGTTACAGCATTAACTCTATTTTAAGTTGTTTTTGAACTTTATTGTT
20 TTGTTATTTAAGTTTATGTTATTTATAAAAAAAACCTTAATAAGCTGTATCTGT
TTCATATGCTTTTAATTTTAAAGGAATAACAAAACCTGTCTGGCTCAACGGCAAGT
TTCCCTCCCTTTTCTGACTGACACTAAGTCTAGCACACAGCACTTGGGCCAGCAA
ATCCTGGAAGCAGACAAAATAAGAGCCTGAAGCAATGCTTACAATAGATGTCT
CACACAGAACAATACAAATATGTAAAACTCTTTCACCACATATTCTTGCCAATT
25 AATTGGATCATATAAGTAAAATCATTACAAATATAAGTATTTACAGGATTTTAAA
GTTAGAATATATTTGAATGCATGGGTAGAAAATATCATATTTTAAACTATGTAT
ATTTAAATTTAGTAATTTTCTAATCTCTAGAAATCTCTGCTGTTCAAAGGTGGCA
GCACTGAAAGTTGTTTTCTGTAGATGGCAAGAGCACAATGCCCAAAATAGAA
GATGCAGTTAAGAATAAGGGGCCCTGAATGTCATGAAGGCTTGAGGTCAGCCTA
30 CAGATAACAGGATTATTACAAGGATGAATTTCCACTTCAAAGTCTTTTATTGGC
AGATCTTGGTAGCACTTTATATGTTACCAATGGGAGGTCAATATTTATCTAATTT
AAAAGGTATGCTAACCCTGTGGTTTTAATTTCAAATATTTGTCATTCAAGTCC
CTTTACATAAATAGTATTTGGTAATACATTTATAGATGAGAGTTATATGAAAAGG
CTAGGTCAACAAAACAATAGATTCATTTAATTTTCTGTGGTTGACCTATACGA
35 CCAGGATGTAGAAAACCTAGAAAGAACTGCCCTTCCTCAGATATACTCTTGGGAG
AGAGCATGAATGGTATTCTGAACCTATCACCTGATTCAAGGACTTTGCTAGCTAGG
TTTTGAGGTCAGGCTTCAGTAACTGTAGTCTTGTGAGCATATTGAGGGCAGAGGA
GGACTTAGTTTTTCATATGTGTTTCTTAGTGCCTAGCAGACTATCTGTTTATAAT
CAGTTTTTCAGTGTGAATTCCTGAATGTTTATAGACAAAAGAAAATACACACTAA
40 AACTAATCTTCATTTTAAAAGGGTAAAACATGACTATACAGAAATTTAAATAGAA
ATAGTGTATATACATATAAAATACAAGCTATGTTAGGACCAATGCTCTTTGTCT
ATGGAGTTATACTTCCATCAAATTACATAGCAATGCTGAATTAGGCAAAACCAAC
ATTTAGTGGTAAATCCATTCCTGGTAGTATAAGTCACCTAAAAAAGACTTCTAGA
AATATGTACTTTAATTATTTGTTTTTCTCCTATTTTTAAATTTATTATGCAAATTTT
45 AGAAAATAAAATTTGCTCTAGTTACACACCTTTAGAATTCTAGAATATTAAACT
GTAAGGGGCCCTCCATCCCTCTTACTCATTTGTAGTCTAGGAAATTGAGATTTTGAT
ACACCTAAGGTCACGCAGCTGGGTAGATATACAGCTGTCACAAGAGTCTAGATC
AGTTAGCACATGCTTTCTACTCTTCGATTATTAGTATTATTAGCTAATGGTCTTTG
GCATGTTTTTGTTTTTTATTTCTGTTGAGATATAGCCTTTACATTTGTACACAAAT

GTGACTATGTCTTGGCAATGCACTTCATACACAATGACTAATCTATACTGTGATG
ATTTGACTCAAAAGGAGAAAAGAAATTATGTAGTTTTCAATTCTGATTCCCTATTC
ACCTTTTGTATGAATGGAAAGCTTTGTGCAAAATATACATATAAGCAGAGTAA
GCCTTTTAAAAATGTTCTTTGAAAGATAAAATTAATAACATGAGTTTCTAACAAT
5 TAGA

SEQ ID NO: 133

>gi|1399238|gb|U59832.1|HSU59832 Human transcription factor, forkhead related activator
4 (FREAC-4) mRNA, complete cds

10 CGCCGCCACCCGGCAGCCCCGGCGCAGCTCCGGCAGCCGCGAGTCGCAGCGCCCC
CAGCGTGGCGCCCCCGGCCGGGCTGCCGCCGGGACCCGGGCTGGGGCGCAG
AGGGAGCCCGGAGCCCGGCGCCCCCATGCGCCGCCCGCCGCCGCCGCCACA
GCTATGACCCTGAGCACTGAGATGTCCGATGCCTCTGGCCTCGCCGAGGAAACA
GACATCGACGTGGTGGGGGAGGGCGAGGACGAAGAAGACGAGGAAGAGGAGGA
15 CGACGACGAGGGCGGGCGGTGGCGGGCCCCGGCTGGCTGTCCCCGCGCAGCGGGC
GCGGCGGGCGGCGCTCGTACGCCGGGGAGGACGAGCTGGAGGATCTGGAGGAGG
AGGAGGACGACGATGACATCCTGCTGGCCCCGCCTGCTGGGGCTCCCCGGCGCC
CCCGGGCCCCGGCCCCGGCGGGGGGAGGAGCCGGTGGGGGGCGGGCGGGCGGCG
GCGGCGCGGGCGGGCGGGAGCGCGGGTAGCGGGCGCCAAGAACCCGCTGGTG
20 AAGCCGCCCTACTCGTATATCGCGCTCATCACTATGGCCATCCTGCAGAGCCCCA
AGAAGCGGCTGACGCTGAGCGAGATCTGTGAGTTCATCAGCGGCCGCTTCCCCTA
CTACCGGGAGAAGTTCCCCGCCTGGCAGAACAGCATCCGCCACAACCTCTCGCTC
AACGACTGCTTCGTCAAGATCCCCCGCGAGCCCGGCAACCCGGGCAAGGGCAAC
TACTGGACGCTGGACCCGGAGTCCGCCGACATGTTGACAACGGCAGCTTCCTGC
25 GCCGGAGGAAGCGCTTCAAGCGGCAGCCGCTGCTCCCACCCAACGCCGCGGGCCG
CCGAGTCTCTGCTGCTGCGCGGGCGGGGAGCCGCAGGGGGCGCGGGGCGACCCGG
CAGCCGCCGCCGCGCTCTTCCCCGCCCGCGCCCCCGCCGCCCGCCGCTACGG
CTACGGCCCCCTACGGCTGCGGCTACGGCCTGCAGCTGCCGCCTTACGCGCCGCC
TCGGCCCTCTTCGCCGCCGCGAGCGGGCCGCCGCCGCCGCCGCCGCTTCCACCCGC
30 ACTCGCCCCCGCCGCCCGCCGCCACCGCACGGCGCGGGCCGCCGAGCTGGCCCCGA
CCGCCTTCGGCTACCGGCCGCACCCGCTCGGCGCCGCCCTACCCGGCCCCCTGCC
GGCCTCCGCGGCCAAGGCGGGCGGCCCGGGCGCCTCAGCGCTGGCGCGCTCGCC
CTTCTCCATCGAGAGCATCATCGGGGGCAGCTTGGGCCCGGCCGCCGCTGCCGCC
GCCGCCGCGCAGGCCGCCGCCGCCGCTCAGGCCTCGCCCTCGCCCTCGCCGGTGG
35 CGGCGCCGCCAGCTCCCGGATCCAGCGGAGGAGGCTGCGCGGCGCAGGCGGCCG
TGGGCCCGGCCGCCGCCGCTCACCCGATCCCTCGTGGCCGCCGCCGCCGCCGCC
CTCCTCAGTCTCCTCGTCCGCCGCCCTTGGGGACTCTGCACCAAGGGACTGCCCTG
TCCAGTGTGAGAACTTTACTGCTAGGATTTCCAATTGTTAATAACGCTATGTTA
GCGCGCTCGAGGAAGAAGGTAGGAATCCCGGCTCCTTTTCTCGTCTTGGTGGTTC
40 GGTGTTTTGTTCGCTCCTCCAGGCGCGGCCCTCTCGACCTCGCGCGCCCATTTTC
GCCGCTGCGAATTCTCGGACAAAAGTGTCAACAGCCCGGGCGCGCCTTTTGGCTC
TGCGGGTCCCTCTATTTATGCAAAGCCGACCTATGCTACAGCCCCCAACCCCG
ACCTGGGGTAGGGAGGAAGAGGGTGCCGGGGAAGGGAGTCCGCCCTGTCCAGG
CACTAGAGGCTCCCTTGACGTTTGGCAGATGAAAAACAATAAGCCTTTTTGAGG
45 TGTAGAGATTCTCAGGTCCAGGCGTTAAAAATAATGGTCAAAAGAATAATACA
AAAATAGTAAAGGTCTTGAAGAATGCCAGCGAAGCAATTCTTTTTTATTTGAGGA
CACTTGTCTGGTGTACTTTTTTCATGAAAAGGAAAAATGGTTAACATGTTTACACA
AGAAAAAAGTCAAAATTATCATTTATTTCAACCTGTGTTTTGTATCATAACAGA
CGTGTGGATTTTTTTGTACTTACTGCGTATTCTTTACAAGGAGTATTGTAAATTTT

ACTGGCAATTATTATTGTACTATTCTAAATGTAAGATTTTACACTTTTTCAGAAA
TAAAAATGCTTAATTTTCAAAGAAAATTCACCAAAA

SEQ ID NO: 134

5 >gi|181977|gb|M38425.1|HUMEGFR Human EGF receptor (EGFR) gene, 5' end
AAGCTTCCGCGAGTTTCCCAGGCATTTCTCCTCGCGGGACTACCAGGGGTAGTGG
GACACTTAGCCTCTCTAAAAGCACCTCCACGGCTGTTTGTGTCAAGCCTTTATTCC
AAGAGCTTCACTTTTGGCAAGTAATGTGCTTACACATTGGCTTCAAAGTACCCA
10 TGGCTGGTTGCAATAAACATTAAGGAGGCCTGTCTCTGCACCCGGAGTTGGTGCC
CTCATTTTCAGATGATTTTCGAGGGTGCTTGACAAGATCTGAAGGACCCTCGGACTT
TAGAGCACCACCTCGGAACGCCTGGCACCCCTGCCGCGCGGGGCACGGCGACCTC
CTCAGCTGCCAGGCCAGCCTCTGATCCCCGCGAGGGGTCCCGTAGTGCTGCAGGG
GGAGGCTGGGGACCCGAATAAAGGAGCAGTTTCCCCGTCGGTGCCATTATCCGA
CGCTGGCTCTAAGGCTCGGCCAGTCTGTCTAAAGCTGGTACAAGTTTGCTTTGTA
15 AAACAAAAGAAGGGAAAGGGGGAAAGGGGACCCTGGCACAGATTTGGCTCGACC
TGGACATAGGCTGGGCTGCAAGTCCGCGGGGACCGGGTCCAGAGGGGGCAGTGCT
GGGAACGCCCTCTCGGAAATTAACCTCCTCAGGGCACCGCTCCCTCCCATGCGC
CGCCCCACTCCCGCCGGAGACTAGGTCCCGCGGGGGCCACCGTGTCCACCGCCTC
GCGGCCGCTGGCCTTGGGTCCCCGCTGCTGGTTCTCCTCCCTCCTCCTCGCATTCT
20 CCTCCTCCTCTGCTCCTCCCGATCCCTCCTCCGCCGCCTGGTCCCTCCTCCTCCCG
CCCTGCCTCCCGCGCCTCGGCCCGCGCGAGCTAGACGTCCGGGCAGCCCCCGGCG
CAGCGCGGCCGCGCAGCAGCCTCCTCCCCCGCACGGTGTGAGCGCCCGCCGCGCC
GAGGCGGCCGGAGTCCCGAGCTAGCCCCGCGGCCGCGCCGCCCAGACCGGACG
ACAGGCCACCTCGTCGCGTCCGCCGAGTCCCCGCCTCGCCGCCAACGCCACAAC
25 CACCGCGCACGGCCCCCTGACTCCGTCCAGTATTGATCGGGAGAGCCGGAGCGA
GCTCTTCGGGGAGCAGCGATGCGACCCTCCGGGACGGCCGGGGCAGCGCTCCTG
GCGCTGCTGGCTGCGCTCTGCCCGGCGAGTCGGGCTCTGGAGGAAAAGAAAGGT
AAGGGCGTGTCTCGCGGCTCCCCGCCGCCCGGATCGCGCCCCGGACCCCGCA
GCCCGCCCAACCGCACCGCGCACCGGCTTCGCCCGCGCCCCCGCCCGTCTTTCC
30 TGTTTCCTTGAGATCACGTGCGCCGCCGACCGGGACCGCGGGAGGAACGGGACG
TTTCGTTCTTCGGCCGGGAGAGTCTGGGGCGGGCGGAGGAGGAGACGCGTGGGA
CACCGGGCTGCAGGCCAGGCGGGGAACGGCCGCCGGGACCTCCGGCGCCCCGAA
CCGCTCCCAACTTTCTTCCCTCACTTTCCCCGCCAGCTGCGCAGGATCGGCGTCA
GTGGGCGAAAGCCGGGTGCTGGTGGGCGCCTGGGGCCGGGGTCCCGCACGGGCT
35 CCCCCGCGTGTCTTCCAGGGCGCGACGGGGTCTGGCGCGCACCCGAGGGCCG
CTGCCCACCCGCCGAGACTGCCTGTTAGGGAAGCTGAGGAAGGAACCAAAAA
TACAGCCTCCGCTCGGACCCCGCGGGACAGGCGGCTTTCTGAGAGGACCTCCCCG
CCTCCGCGCTCCGCGCAGGTCTCAAAGTGAAGCCGGCGCCCGCCAGCCTGGCCCC
GGCCCCCTCTCAGGTCCCCGCGATCCTCGTTCCCCAGTGTGGAGTCGCAGCCTCG
40 ACCTGGGAGCTGGGAGAACTCGTCTACCACCACCTGCGGCTCCCGGGGAGGGGT
GGTGCTGGCGGCGGTTAGTTTCCTCGTTGGCAAAAGGCAGGTGGGGTCCGACCC
GCCCCCTTGGGCGCAGACCCCGGCCGCTCGCCTCGCCGGTGCGCCCTCGTCTTGC
CTATCCAAGAGTGCCCCCACTCCCGGGACCCAGCTCCCTCCGCGCCCGCGCCG
AAAGCCCCAGGCTCTCCTTCGATGGCCGCCTCGCGGAGACGTCCGGGTCTGCTCC
45 ACCTGCAGCCCTTCGGTCGCGCCTGGGCTTCGCGGTGGAGCGGGACGCGGCTGTC
CGGCCACTGCAGGGGGGGATCGCGGGACTCTTGAGCGGAAGCCCCGGAAGCAGA
GCTCATCCTGGCCAACACCATGGTGTTCAAAATGGGGCTCACAGCAAACCTTCTC
CTCAAAACCCGGAGACTTTCTTTCTTGGATGTCTCTTTTGTCTGTTTGAAGAATT
GAGCCAACCAAAATATTAACCTGTCTTACACACACACACACACACACACAC

ACACACACCGGATTGCTGTCCCTGGTTCAAGTGTGCCAAGTGTGCAGAAGAACAT
 GAGCGAGTCTGGCTTCGTGACTACCGACCATAAACCCACTTGACAGGGGAAACA
 TGCCTTGGAAGGTTTAATTGCACAATTCCAACCTTGACTGCGCGGGTTCCAAGAG
 CCAGGCCCGTACTTGCTGTTGATGTCATTGGCTTGGGGAGTTGGGGTTTGGTGCC
 5 CAGCGCGGTCGTTGGGGGAGGGGCGGAAGGCATAGAACAGTGGTTCCTGCGCC
 CTTCTGCACATTGGAATTACCTGGGATTAATAAAAAAAAAAATCAAAACAAAAACC
 AGTGTCTCGTCCCGCCCCCAGACATTCTGATTTAATTGGCATGGGGCAAGACCTG
 GACTTGGGATTTTTTTTAAATGCTCTTCATGTGATCTGTTGGGCAGCCAGATTGGG
 GATCACTAGACGGAAGAAGGATTGTTAAAGTCTCCGGAGATGTTACTTGCCAAT
 10 GCTAAGAGCTCTTTGAGACATCTGGAATTGTTACAATATTGCCAAATATAGGAAA
 GAGGGAAAAGGTAGAGTGTGATTCCAATAATAAAGGATTCCGCTTTTCATTGAA
 GGAAGTGGTGGAAGGTTTCTTCTCTGCTAGACCTGCAGGCCCGTCTGCTGCC
 TGGGGCGCCCGGGAGACGCGGGCCTGCTCCGGAGACTGCTGACTGCCGGTCTTG
 TTAGTCAGGTGTCAGCCCTGTCTCTGCCGAAGAGACTCTCTCTTTATTTTAAATTA
 15 AACCTCAGAGCACCACCAAAGCATCACTTTTCTCCCTCCATTGGTGTCTCATTC
 TTTGATGTTACTTGTGTTGAACACCACTATTAGTAGTTGGAGATTTGTTCCCTGAGAA
 AAATATAAATACCACTTAATTTGCCTGTTTGTCCCGCATTCACTCAAAACAGAAT
 GCTCCTGAAGACAAGAGAGAGAGTAGGAGAACAGACGCTATTCCATTACAGTAA
 CATAAAAGACTGGATTTTCAGGGGCAAATTATTAATAAGGAGATGAGCTCTTTT
 20 AACAGAAATTTGTTTAAGGCCTGTGTCTATCAAATTCAGTGGATTTTATTCAAGA
 TGCATTTGTTTAGTGGGAGTTTGTGTTGTTCTGGGACATGCTAACTTCTAGACT
 TGCTGCTCTTAGAGGTAATGACTGCCAGACACCATTTTCATGAGTCCTAATCCCCA
 CATTAAAGCATAAGAGGTGCACACTCTCCTCCTATGGGGGAAACTGAGGTACGAA
 GAACTAAAGTGACTTTCCACAGCTGGTGGGAGGCAGACGGGAAATTCACACCA
 25 GGGGCTTCCAACCTCCAGATCCCTCTCTCAACTTCCAACTCCACTGCCTTGTCCGA
 GTTCTGGTTTCAGGAGATCCAAATCAGGTGTGTGCAAATGTCTAATGTCAGAGCT
 GGCAAGGGGAAAGGGCCCAGGGAGCCGGCTCATGACGATGAGCCTGTCTGAAGC
 TT

30 SEQ ID NO: 135
 >gi|2162425|gb|AA448755.1|AA448755 zx10d10.r1 Soares_total_fetus_Nb2HF8_9w Homo
 sapiens cDNA clone IMAGE:786067 5' similar to gb:S78187 M-PHASE INDUCER
 PHOSPHATASE 2 (HUMAN);, mRNA sequence
 CAGTCTGTTGAGTTAGTTAAGTTGGGTTAATACCAGCTTAAAGGCAGTATTTTGT
 35 GTCCTCCAGGAGCTTCTTGTTCCTTGTTAGGGTTAACCCTTCATCTTCCTGTGTC
 CTGAAACGCTCCTTTGTGTGTGTGTCAGCTGAGGCTGGGGGAGAGCCGTGGTCCC
 TGAGGATGGGTCAGAGCTAACTCCTTCCTGGCCTGAGAGTCAGCTCTCTGCCCT
 GTGTACTTCCCGGGCCAGGGCTGCCCTAATCTCTGTAGGAACCGTGGTATGTCT
 GCCATGTTGCCCTTTCTCTTTTCCCTTTCCCTGTCCCACCATACGAGCACCTCCA
 40 GCCTGAACAGAAGCTCTTACTCTTTCCTATTTCAAGTGTACCTGTGTGCTTGGTCT
 GTTTGACTTTACGC

SEQ ID NO: 136
 >gi|189389|gb|M97016.1|HUMOP2A Homo sapiens osteogenic protein-2 (OP-2) mRNA,
 45 complete cds
 CCACAGTGGCGCCGGCAGAGCAGGAGTGGCTGGAGGAGCTGTGGTTGGAGCAGG
 AGGTGGCACGGCAGGGCTGGAGGGCTCCCTATGAGTGGCGGAGACGGCCCAGGA
 GCGCTGGAGCAACAGCTCCACACCGCACCAAGCGGTGGCTGCAGGAGCTCGC
 CCATCGCCCCTGCGCTGCTCGGACCGCGGCCACAGCCGGACTGGCGGGTACGGC

GGCGACAGACGGATTGGCCGAGAGTCCCAGTCCGCAGAGTAGCCCCGGCCTCGA
GGCGGTGGCGTCCCGGTCTCTCCGTCCAGGAGCCAGGACAGGTGTGCGCGGGC
GGGGCTCCAGGGACCGCGCCTGAGGCCGGCTGCCCGCCCGTCCCGCCCCGCCCC
GCCGCCCGCCGCCCGCCGAGCCCAGCCTCCTTGCCGTCGGGGCGTCCCCAGGCCC
5 TGGGTCGGCCGCGGAGCCGATGCGCGCCCGCTGAGCGCCCCAGCTGAGCGCCCC
CGGCCTGCCATGACCGCGCTCCCCGGCCCCGCTCTGGCTCCTGGGCCTGGCGCTAT
GCGCGCTGGGCGGGGGCGGCCCGGCCCTGCGACCCCCGCCCGGCTGTCCCCAGC
GACGTCTGGGCGCGCGCGAGCGCCGGGACGTGCAGCGCGAGATCCTGGCGGTGC
TCGGGCTGCCTGGGCGGGCCCCGGCCCCGCGCGCCACCCGCCGCTCCCGGCTGCC
10 CGCGTCCGCGCCCGCTCTTCATGCTGGACCTGTACCACGCCATGGCCGGCGACGAC
GACGAGGACGGCGCGCCCCGCGGAGCGGCGCCTGGGCCGCGCCGACCTGGTCATG
AGCTTCGTAAACATGGTGGAGCGAGACCGTGCCCTGGGCCACCAGGAGCCCCAT
TGGAAGGAGTTCCGCTTTGACCTGACCCAGATCCCGGCTGGGGAGGCGGTCA
GCTGCGGAGTTCCGGATTTACAAGGTGCCCAGCATCCACCTGCTCAACAGGACCC
15 TCCACGTCAGCATGTTCCAGGTGGTCCAGGAGCAGTCCAACAGGGAGTCTGACTT
GTTCTTTTTGGATCTTCAGACGCTCCGAGCTGGAGACGAGGGGCTGGCTGGTGCTG
GATGTCACAGCAGCCAGTGACTGCTGGTTGCTGAAGCGTCACAAGGACCTGGGA
CTCCGCCTCTATGTGGAGACTGAGGACGGGCACAGCGTGGATCCTGGCCTGGCC
GGCCTGCTGGGTCAACGGGCCCCACGCTCCCAACAGCCTTTCGTGGTCACTTTCT
20 TCAGGGCCAGTCCGAGTCCCATCCGCACCCCTCGGGCAGTGAGGCCACTGAGGA
GGAGGCAGCCGAAGAAAAGCAACGAGCTGCCGCAGGCCAACCGACTCCCAGGG
ATCTTTGATGACGTCCACGGCTCCACGGCCGGCAGGTCTGCCGTCCGCACGAGC
TCTACGTCAGCTTCCAGGACCTCGGCTGGCTGGACTGGGTCATCGCTCCCCAAGG
CTACTCGGCCTATTACTGTGAGGGGGAGTGCTCCTTCCCACTGGACTCCTGCATG
25 AATGCCACCAACCACGCCATCCTGCAGTCCCTGGTGCACCTGATGAAGCCAAAC
GCAGTCCCCAAGGCGTGCTGTGCACCCACCAAGCTGAGCGCCACCTCTGTGCTCT
ACTATGACAGCAGCAACAACGTCATCCTGCGCAAGCACCGCAACATGGTGGTCA
AGGCCTGCGGCTGCCACTGAGTCAGCCCGCCAGCCCTACTGCAGCCACCCTTCT
CATCTGGATCGGGCCCTGCAGAGGCAGAAAACCCTTAAATGCTGTACAGCTCA
30 AGCAGGAGTGTGAGGGGCCCTCACTCTCTGTGCCTACTTCCTGTCAGG

SEQ ID NO: 137

>gi|181979|gb|M29366.1|HUMEGFRBB3 Human epidermal growth factor receptor
(ERBB3) mRNA, complete cds

35 ACCAATTCCGCCAGCGGTTCAAGGTGGCTCTTGCCTCGATGTCCTAGCCTAGGGGGCC
CCCGGGCCGGAAGTTGGCTGGGCTCCCTTCACCCTCTGCGGAGTCATGAGGGCGAA
CGACGCTCTGCAGGTGCTGGGCTTGCTTTTCAGCCTGGCCCCGGGGCTCCGAGGTG
GGCAACTCTCAGGCAGTGTGTCCTGGGACTCTGAATGGCCTGAGTGTGACCGGCG
ATGCTGAGAACCAATACCAGACACTGTACAAGCTCTACGAGAGGTGTGAGGTGG
40 TGATGGGGAAACCTTGAGATTGTGCTCACGGGACACAATGCCGACCTCTCCTTCT
GCAGTGGATTTCGAGAAGTGACAGGCTATGTCCTCGTGGCCATGAATGAATTCTCT
ACTCTACCATTTGCCAACCTCCGCGTGGTGCAGGGACCCAGGTCTACGATGGGA
AGTTTGCCATCTTCGTCATGTTGAACTATAACACCAACTCCAGCCACGCTCTGCG
CCAGCTCCGCTTGACTCAGCTCACCGAGATTCTGTCAGGGGGTGTATTATATTGAG
45 AAGAACGATAAGCTTTGTCACATGGACACAATTGACTGGAGGGACATCGTGAGG
GACCGAGATGCTGAGATAGTGGTGAAGGACAATGGCAGAAGCTGTCCCCCTGT
CATGAGGTTTGCAAGGGGCGATGCTGGGGTCTGGATCAGAAGACTGCCAGACA
TTGACCAAGACCATCTGTGCTCCTCAGTGTAATGGTCACTGCTTTGGGCCCAACC
CCAACCAGTGCTGCCATGATGAGTGTGCCGGGGGCTGCTCAGGCCCTCAGGACA

CAGACTGCTTTGCCTGCCGGCACTTCAATGACAGTGGAGCCTGTGTACCTCGCTG
TCCACAGCCTCTTGTCTACAACAAGCTAACTTTCCAGCTGGAACCCAATCCCCAC
ACCAAGTATCAGTATGGAGGAGTTTGTGTAGCCAGCTGTCCCCATAACTTTGTGG
TGGATCAAACATCCTGTGTGAGGGCCTGTCCTCCTGACAAGATGGAAGTAGATAA
5 AAATGGGCTCAAGATGTGTGAGCCTTGTGGGGGACTATGTCCCAAAGCCTGTGA
GGGAACAGGCTCTGGGAGCCGCTTCCAGACTGTGGACTCGAGCAACATTGATGG
ATTTGTGAACTGCACCAAGATCCTGGGCAACCTGGACTTTCTGATCACCGGCCTC
AATGGAGACCCCTGGCACAAGATCCCTGCCCTGGACCCAGAGAAGCTCAATGTC
TTCCGGACAGTACGGGAGATCACAGGTTACCTGAACATCCAGTCCCTGGCCGCCCC
10 ACATGCACAACCTTCAGTGTTTTTTTCCAATTTGACAACCATTGGAGGCAGAAGCCT
CTACAACCGGGGCTTCTCATTGTTGATCATGAAGAACTTGAATGTCACATCTCTG
GGCTTCCGATCCCTGAAGGAAATTAGTGCTGGGCGTATCTATATAAGTGCCAATA
GGCAGCTCTGCTACCACCACTCTTTGAACTGGACCAAGGTGCTTCGGGGGCCTAC
GGAAGAGCGACTAGACATCAAGCATAATCGGCCGCGCAGAGACTGCGTGGCAGA
15 GGGCAAAGTGTGTGACCCACTGTGCTCCTCTGGGGGATGCTGGGGGCCAGGCCCT
GGTCAGTGCTTGTCTGTCGAAATTATAGCCGAGGAGGTGTCTGTGTGACCCACT
GCAACTTTCTGAATGGGGAGCCTCGAGAATTTGCCCATGAGGCCGAATGCTTCTC
CTGCCACCCGGAATGCCAACCCATGGAGGGGCACTGCCACATGCAATGGCTCGGG
CTCTGATACTTGTGCTCAATGTGCCCATTTTCGAGATGGGCCCCACTGTGTGAGC
20 AGCTGCCCCCATGGAGTCCTAGGTGCCAAGGGGCCAATCTACAAGTACCCAGAT
GTTCAGAATGAATGTCGGCCCTGCCATGAGAACTGCACCCAGGGGTGTAAAGGA
CCAGAGCTTCAAGACTGTTTAGGACAAACACTGGTGCTGATCGGCCAAAACCCAT
CTGACAATGGCTTTGACAGTGATAGCAGGATTGGTAGTGATTTTCATGATGCTGG
GCGGCACTTTTCTCTACTGGCGTGGGCGCCGGATTGAGAATAAAAGGGCTATGAG
25 GCGATACTTGGAACGGGGTGAGAGCATAGAGCCTCTGGACCCAGTGAGAAGGC
TAACAAAGTCTTGGCCAGAATCTTCAAAGAGACAGAGCTAAGGAAGCTTAAAGT
GCTTGGCTCGGGTGTCTTTGGAACCTGTGCACAAAGGAGTGTGGATCCCTGAGGGT
GAATCAATCAAGATTCCAGTCTGCATTAAAGTCATTGAGGACAAGAGTGGACGG
CAGAGTTTTCAAGCTGTGACAGATCATATGCTGGCCATTGGCAGCCTGGACCATG
30 CCCACATTGTAAGGCTGCTGGGACTATGCCAGGGTCATCTCTGCAGCTTGTAC
TCAATATTTGCCTCTGGGTTCTCTGCTGGATCATGTGAGACAACACCGGGGGGCA
CTGGGGCCACAGCTGCTGCTCAACTGGGGAGTACAAATTGCCAAGGGAATGTAC
TACCTTGAGGAACATGGTATGGTGCATAGAAACCTGGCTGCCCCGAAACGTGCTA
CTCAAGTCACCCAGTCAGGTTCAAGTGGCAGATTTTGGTGTGGCTGACCTGCTGC
35 CTCCTGATGATAAGCAGCTGCTATACAGTGAGGCCAAGACTCCAATTAAGTGGAT
GGCCCTTGAGAGTATCCACTTTGGGAAATACACACACCAGAGTGATGTCTGGAG
CTATGGTGTGACAGTTTGGGAGTTGATGACCTTCGGGGCAGAGCCCTATGCAGGG
CTACGATTGGCTGAAGTACCAGACCTGCTAGAGAAGGGGGAGCGGTTGGCACAG
CCCCAGATCTGCACAATTGATGTCTACATGGTGTGTTCAAGTGTGGATGATTG
40 ATGAGAACATTCGCCCCAACCTTTAAAGAACTAGCCAATGAGTTCACCAGGATGG
CCCGAGACCCACCACGGTATCTGGTCATAAAGAGAGAGAGTGGGCCTGGAATAG
CCCCTGGGCCAGAGCCCCATGGTCTGACAAACAAGAAGCTAGAGGAAGTAGAGC
TGGAGCCAGAACTAGACCTAGACCTAGACTTGGAAGCAGAGGAGGACAACCTGG
CAACCACCACACTGGGCTCCGCCCTCAGCCTACCAGTTGGAACACTTAATCGGCC
45 ACGTGGGAGCCAGAGCCTTTTAAGTCCATCATCTGGATACATGCCCATGAACAG
GGTAATCTTGGGGAGTCTTGCCAGGAGTCTGCAGTTTCTGGGAGCAGTGAACGGT
GCCCCCGTCCAGTCTCTCTACACCCAATGCCACGGGGATGCCTGGCATCAGAGTC
ATCAGAGGGGCATGTAACAGGCTCTGAGGCTGAGCTCCAGGAGAAAGTGTCAAT
GTGTAGAAGCCGGAGCAGGAGCCGGAGCCCACGGCCACGCGGAGATAGCGCCT

ACCATTCCCAGCGCCACAGTCTGCTGACTCCTGTTACCCCACTCTCCCCACCCGG
GTTAGAGGAAGAGGATGTCAACGGTTATGTCATGCCAGATACACACCTCAAAGG
TACTCCCTCCTCCCGGAAGGCACCCCTTTCTTCAGTGGGTCTTAGTTCTGTCTGG
GTACTGAAGAAGAAGATGAAGATGAGGAGTATGAATACATGAACCGGAGGAGA
5 AGGCACAGTCCACCTCATCCCCCTAGGCCAAGTTCCTTGAGGAGCTGGGTTATG
AGTACATGGATGTGGGGTCAGACCTCAGTGCCTCTCTGGGCAGCACACAGAGTT
GCCCCTCCACCCTGTACCCATCATGCCCACTGCAGGCACAACCTCCAGATGAAGA
CTATGAATATATGAATCGGCAACGAGATGGAGGTGGTCCTGGGGGGTGATTATGC
AGCCATGGGGGCCTGCCAGCATCTGAGCAAGGGTATGAAGAGATGAGAGCTTT
10 TCAGGGGCCTGGACATCAGGCCCCCATGTCCATTATGCCCGCCTAAAACTCTA
CGTAGCTTAGAGGCTACAGACTCTGCCTTTGATAACCCTGATTACTGGCATAGCA
GGCTTTTCCCCAAGGCTAATGCCAGAGAACGTAACCTCCTGCTCCCTGTGGCACT
CAGGGAGCATTTAATGGCAGCTAGTGCCTTTAGAGGGTACCGTCTTCTCCCTATT
CCCTCTCTCTCCCAGGTCCCAGCCCCTTTTCCCCAGTCCCAGACAATTCCATTCAA
15 TCTTTGGAGGCTTTTAAACATTTTGACACAAAATTCTTATGGTATGTAGCCAGCTG
TGCACTTTCTTCTCTTTCCCAACCCCAAGGAAAGGTTTTCCTTATTTTGTGTGCTTTC
CCAGTCCCATTCTCAGCTTCTTACAGGCACTCCTGGAGATATGAAGGATTACT
CTCCATATCCCTTCTCTCAGGCTCTTGACTACTTGGAAGTGGCTCTTATGTGTG
CCTTTGTTTCCCATCAGACTGTCAAGAAGAGGAAAGGGAGGAAACCTAGCAGAG
20 GAAAGTGTAATTTTGGTTTATGACTCTTAACCCCTAGAAAGACAGAAGCTTAAA
ATCTGTGAAGAAAGAGGTTAGGAGTAGATATTGATTACTATCATAATTCAGCACT
TAACTATGAGCCAGGCATCATACTAACTTCACCTACATTATCTCACTTAGTCCTT
TATCATCCTTAAAACAATTCTGTGACATACATATTATCTCATTTTACACAAAGGG
AAGTCGGGCATGGTGGCTCATGCCTGTAATCTCAGCACTTTGGGAGGCTGAGGCA
25 GAAGGATTACCTGAGGCAAGGAGTTTGAGACCAGCTTAGCCAACATAGTAAGAC
CCCCATCTCTTT

SEQ ID NO: 138

>gi|1123184|gb|H98534.1|H98534 yv97d06.s1 Soares melanocyte 2NbHM Homo sapiens
30 cDNA clone IMAGE:250667 3', mRNA sequence
ATCTAACATTATTGCTTTAGGAAAGTATTTCCCTGAACCAAGAATACAATGCTAA
TTGCATAAAAACATACACATATAAAAAGTAGTTCTCCATTTTCCCAGGAAAAAAT
CCAAGTATAACTTCTAGAATAGTCAAGTTTCTTATTTTATTATAATTAAAGTCTT
GGTCATTTTCAATTTATTAGCTCTGCAACTTACATATTTAAATTAAAGAAACGTTATT
35 AGACAACNGTTACAATTTATAAATGTAAGGTGCCATTATTGAGTAAATATATTCC
TCCAAGAGTGGATGTGNCCCTTCTCCCANCACTAATGAAGCAGCAACATTAGGT
TAAATTTATTAGGAGATGATACACTGGCTGNAACGCTAATTCNCCTTCTCCAAC
CCCAAG

40 SEQ ID NO: 139

>gi|1813881|dbj|D49728.1|HUMNAK1 Human NAK1 mRNA for DNA binding protein,
complete cds
CGAACTTGGGGGGAGTGCACAGAAGAACTTCGGGAGCGCACGCGGGACCAGGG
ACCAGGCTGAGACTCGGGGCGCCAGTCCGGGCAGGGGCAGCGGGAGCCGGCCG
45 GAGATGCCCTGTATCCAAGCCCAATATGGGACACCAGCACCGAGTCCGGGACCC
CGTGACCACCTGGCAAGCGACCCCTGACCCCTGAGTTCATCAAGCCCACCATGG
ACCTGGCCAGCCCCGAGGCAGCCCCCGCTGCCCCCACTGCCCTGCCAGCTTCAG
CACCTTCATGGACGGCTACACAGGAGAGTTTGACACCTTCCTCTACCAGCTGCCA
GGAACAGTCCAGCCATGCTCCTCAGCCTCCTCCTCGGCCTCCTCCACATCCTCGTC

CTCAGCCACCTCCCCTGCCTCTGCTTCCTTCAAGTTCGAGGACTTCCAGGTGTACG
GCTGCTACCCCGGCCCCCTGAGCGGCCCAAGTGGATGAGGCCCTGTCCTCCAGTGG
CTCTGACTACTATGGCAGCCCCCTGCTCGGCCCCGTGCCCCCTCCACGCCCAGCTTC
CAGCCGCCCCAGCTCTCTCCCTGGGATGGCTCCTTCGGCCACTTCTCGCCCAGCC
5 AGACTTACGAAGGCCTGCGGGCATGGACAGAGCAGCTGCCCAAAGCCTCTGGGC
CCCCACAGCCTCCAGCCTTCTTTTCCTTCAGTCCTCCACCGGCCCCAGCCCCAGC
CTGGCCCAGAGCCCCCTGAAGTTGTTCCCCTCACAGGCCACCCACCAGCTGGGGG
AGGGAGAGAGCTATTCCATGCCTACGGCCTTCCCAGGTTTGGCACCCACTTCTCC
ACACCTTGAGGGCTCGGGGATACTGGATAACCCCGTGACCTCAACCAAGGCCCG
10 GAGCGGGGCCCCAGGTGGAAGTGAAGGCCGCTGTGCTGTGTGTGGGGACAACGC
TTCATGCCAGCATTATGGTGTCCGCACATGTGAGGGCTGCAAGGGCTTCTTCAAG
CGCACAGTGCAGAAAAACGCCAAGTACATCTGCCTGGCTAACAAGGACTGCCCT
GTGGACAAGAGGCGGGCGAAACCGCTGCCAGTTCTGCCGCTTCCAGAAGTGCCTG
GCGGTGGGCATGGTGAAGGAAGTTGTCCGAACAGACAGCCTGAAGGGGCGGCG
15 GGGCCGGCTACCTTCAAAAACCCAAGCAGCCCCCAGATGCCTCCCCTGCCAATCTC
CTCACTTCCCTGGTCCGTGCACACCTGGACTCAGGGCCCAGCACTGCCAACTGG
ACTACTCCAAGTTCCAGGAGCTGGTGTGCCCCACTTTGGGAAGGAAGATGCTGG
GGATGTACAGCAGTTCTACGACCTGCTCTCCGGTTCTCTGGAGGTCATCCGCAAG
TGGGCGGAGAAGATCCCTGGCTTTGCTGAGCTGTCACCGGCTGACCAGGACCTGT
20 TGCTGGAGTCGGCCTTCTGGAGCTCTTCATCCTCCGCCTGGCGTACAGGTCTAA
GCCAGGCGAGGGCAAGCTCATCTTCTGCTCAGGCCTGGTGTACACCGGCTGCAG
TGTGCCCGTGGCTTCGGGGACTGGATTGACAGTATCCTGGCCTTCTCAAGGTCCC
TGCACAGCTTGCTTGTCGATGTCCCTGCCTTCGCCTGCCTCTCTGCCCTTGTCTC
ATCACCGACCGGCATGGGCTGCAGGAGCCGCGGGCGGGTGGAGGAGCTGCAGAAC
25 CGCATCGCCAGCTGCCTGAAGGAGCACGTGGCAGCTGTGGCGGGCGAGCCCCAG
CCAGCCAGCTGCCTGTACGCTCTGTTGGGCAAACCTGCCCCGAGCTGCGGACCCTGT
GCACCCAGGGCCTGCAGCGCATCTTCTACCTCAAGCTGGAGGACTTGGTGGCCCC
TCCACCCATCATTGACAAGATCTTCATGGACACGCTGCCCTTCTGACCCCTGCCT
GCCTGGGAACACGTGTGCACATGCGCACTCTCTCATATGCCACCCCATGTGCCTT
30 TAGTCCACGGACCCCAAGAGCACCCCCAAGCCTGGGCTTAGCTGCAGAACAGAGG
GACCTGCTCACCTGCCCAAAGGGGATGAAGGGAGGGAGGCTCAAGGCCCTTGGG
GGAGGGGGATGCCTTCATGGGGGTGACCCACGATGTGTTCTTATCCCCCCCCGCT
GGCCACCGGCCTTTATGTTTTTTGTAAGATAAACCCTTTTAAACACATAGCGCCGT
GCTGTAAATAAGCCCAGTACTGCTGTAAATAACAGGAAGAAAGAGCTTGAGGTGG
35 GAGCGGGCTGGGAGGAAGGGATGGGCCCCGGCCTTCTGGGCAGCCTTCCAGC
CTCCTGCTGGGCTCTCTCTTCCCTACCCTCCTTCCACATGTACATGTACATAAACTG
TCACTCTAGGAAGAAGACAAATGACAGATTCTGACCATTATATTTGTGTATTTT
CCAGGATTTATAGTATGTGACTTTTCTGATTAATATATTTAATATATTGAATAAAA
AATAGACATGTAGTTGG

40

SEQ ID NO: 140

>gi|178049|gb|M93415.1|HUMACTIIA Human activin type II receptor mRNA, complete cds
GGGGCCGCCCCCTTCCCCGCGCCGCAGCCGCCTCGCCGCCACCGCCGCGAGCTCGG
CCGCCAGTGGTCTCTCGGACTTTAGGTGTCTGGGTTGAAGGAGGTTTGTCTCCGAG
45 GAAGACCCAGGGAAGTGGATATCTAGCGAGAACTTCTCCGGATTCCCCGGCGC
CTCGGGAAAATGGGAGCTGCTGCAAAGTTGGCGTTTGCCGTCTTTCTTATCTCCT
GTTCTTCAGGTGCTATACTTGGTAGATCAGAACTCAGGAGTGTCTTTTCTTTAAT
GCTAATTGGGAAAAAGACAGAACCAATCAAACCTGGTGTGTAACCGTGTTATGGT
GACAAAGATAAACGGCGGCATTGTTTTGCTACCTGGAAGAATATTTCTGGTTCCA

TTGAAATAGTGAAACAAGGTTGTTGGCTGGATGATATCAACTGCTATGACAGGA
CTGATTGTGTAGAAAAAAGACAGCCCTGAAGTATATTTTTGTTGCTGTGAGGG
CAATATGTGTAATGAAAAGTTTTCTTATTTTCCGGAGATGGAAGTCACACAGCCC
ACTTCAAATCCAGTTACACCTAAGCCACCCTATTACAACATCCTGCTCTATTCCTT
5 GGTGCCACTTATGTTAATTGCGGGGATTGTCATTTGTGCATTTTGGGTGTACAGG
CATCACAAGATGGCCTACCCTCCTGTACTTGTTCCAACTCAAGACCCAGGACCAC
CCCCACCTTCTCCATTACTAGGTTTGA AACCACTGCAGTTATTAGAAGTGAAAGC
AAGGGGAAGATTTGGTTGTGTCTGGAAAGCCCAGTTGCTTAACGAATATGTGGCT
GTCAAAATATTTCCAATACAGGACAAACAGTCATGGCAAAATGAATACGAAGTC
10 TACAGTTTGCCTGGAATGAAGCATGAGAACATATTACAGTTCATTGGTGCAGAAA
AACGAGGCACCAAGTGTGATGTGGATCTTTGGCTGATCACAGCATTTCATGAAAA
GGGTTCACTATCAGACTTTCTTAAGGCTAATGTGGTCTCTTGGAATGAACTGTGT
CATATTGCAGAAACCATGGCTAGAGGATTGGCATATTTACATGAGGATATACCTG
GCCTAAAAGATGGCCACAAACCTGCCATATCTCACAGGGACATCAAAAGTAAAA
15 ATGTGCTGTTGAAAAACAACCTGACAGCTTGCATTGCTGACTTTGGGTTGGCCTT
AAAATTTGAGGCTGGCAAGTCTGCAGGCGATACCCATGGACAGGTTGGTACCCG
GAGGTACATGGCTCCAGAGGTATTAGAGGGTGCTATAAACTTCCAAAGGGATGC
ATTTTTGAGGATAGATATGTATGCCATGGGATTAGTCCTATGGGAACTGGCTTCT
CGCTGTA CTGCTGCAGATGGACCTGTAGATGAATACATGTTGCCATTTGAGGAGG
20 AAATTGGCCAGCATCCATCTCTTGAAGACATGCAGGAAGTTGTTGTGCATAAAAA
AAAGAGGCCTGTTTTAAGAGATTATTGGCAGAAACATGCTGGAATGGCAATGCT
CTGTGAAACCAATTGAAGAATGTTGGGATCACGACGCAGAAGCCAGGTTATCAGC
TGGATGTGTAGGTGAAAGAATTACCCAGATGCAGAGACTAACAAATATTATTAC
CACAGAGGACATTGTAACAGTGGTCACAATGGTGACAAATGTTGACTTTCCTCCC
25 AAAGAATCTAGTCTATGATGGTTGCGCCATCTGTGCACACTAAGAAATGGGACTC
TGA ACTGGAGCTGCTAAGCTAAAGAAACTGCTTACAGTTTATTTTCTGTGTAAAA
TGAGTAGGATGTCTCTTGGAATGTTAAGAAAGAAGACCCTTTGTTGAAAAATGT
TGCTCTGGGAGACTTACTGCATTGCCGACAGCACAGATGTGAAGGACATGAGAC
TAAGAGAAACCTTGCAAACCTCTATAAAGAAACTTTTGAAAAAGTGATACATGAAG
30 AATGTAGCCCTCTCCAAATCAAGGATCTTTTGGACCTGGCTAATGGAGTGTTTGA
AACTGACATCAGATTTCTTAATGTCTGTGAGAAGACACTAATTCCTTAAATGAA
CTACTGCTATTTTTTTTTAAATCAAAAACCTTTTCATTTTCAGATTTTAAAAAGGGTAA
CTTGTTTTTATTGCATTTGCTGTTGTTTCTATAAATGACTATTGTAATGCCAATAT
GACACAGCTTGTGAATGTTTAGTGTGCTGCTGTTCTGTGTACATAAAGTCATCAA
35 AGTGGGGTACAGTAAAGAGGCTTCCAAGCATTACTTTAACCTCCCTCAACAAGGT
ATACCTCAGTTCCACGGTTGCTAAATTATAAAATTGAAAACACTAACAAAATTTG
AATAATAAATCGATCCATGTTTCCC

SEQ ID NO: 141

40 >gi|2162949|gb|AA448929.1|AA448929 zx05d04.r1 Soares_total_fetus_Nb2HF8_9w Homo
sapiens cDNA clone IMAGE:785575 5' similar to gb:U05875 INTERFERON-GAMMA
RECEPTOR BETA CHAIN PRECURSOR (HUMAN);, mRNA sequence
AACATATCTTGCTACGAAACAATGGCAGATGCTCCACTGAGCTTCAGCAAGTCAT
CCTGATCTCCGTGGGAACATTTTCGTTGCTGTCGGTGCTGGCAGGAGCCTGTTTCT
45 TCCTGGTCCTGAAATATAGAGGCCTGATTAAATACTGGTTTCACACTCCACCAAG
CATCCCATTACAGATAGAAGAGTATTTAAAGACCCAACTCAGCCCATCTTAGAG
GCCTTGGACAAGGACAGCTACCAAAGGATGACGTCTGGGACTCTGTGTCCAT

SEQ ID NO: 142

>gi|2216790|gb|AA486626.1|AA486626 ab16a03.r1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:840940 5' similar to gb:Y00345_cds1 POLYADENYLATE-BINDING PROTEIN (HUMAN);, mRNA sequence

5 GCCGCTCCTTGGGCTACGCGTATGTGAACCTCCAGCAGCCGGCGGATCCGGACGT
GCATTTGGACACCATGAATTTTGATGTTATAAAGGGCAAGCCAGTACGCATCATG
TGGTCTCAGCGTGATCCATCACTTCGCAAAAGTGGAGTAGGCAACATATTCATTA
AAAATCTGGACAAATCCATTGATAATAAAGCACTGTATGATACATTTTCTGCTTT
TGGTAACATCCTTTCATGTAAGGTGGTTTGTGATGAAAATGGTTCCAAGGGCTAT
10 GGATTTGTACACTTTGAGACGCAGGAAGCAGCTGAAAGAGCTATTGAAAAAATG
AATGGAATGCTCCTAAATGATCGCAAAGTATTTGTTGGACGATTAAAGTCTCGTA
AAGAACGAGAAGCTGAACTTGGAGCTAGGGCAAAGAATTCCACAATGTTTACA
TC

15 SEQ ID NO: 143

>gi|189713|gb|M21571.1|HUMPDGFA1 Human platelet-derived growth factor (PDGFA) A chain gene, exon 1

GAGGGAGGGGCGCGGAGCCCCGGCGCGGAGCCGGGCGCGGGGCTTTGATGGATT
TAGCTGCTTGCGCGAGCGCGTGTGTGCTCCCTGCCGCAGCGGCGGCGCCCGGGCC
20 CTGCCGGGTCCGCACGAACCCCGAGCGCTTCCGAGGTGCGGGTCCCAGGCCCGG
AATCCGGGGGAGGCGGGGGGGGGGGGGCGGGGGCGGGGGCGGGGGAGGGGCG
CGGCGGCGGCGCTATAACCTCTCCCCGCCGCCGGCCGGCTCCACACGCGCGCCC
TGCGGAGCCCCGCCAACTCCGGCGAGCCGGGCCTGCGCCTACTCCTCCTCCTCCT
CTCCCGGCGGCGGCTGCGGCGGAGGCGCCGACTCGGCCTTGCGCCCGCCCTCAG
25 GCCCCGCGCGGGCGGCGCAGCGAGGCCCGGGCGGCGGGTGGTGGCTGCCAGGCG
GCTCGGCCGCGGGCGCTGCCCGGCCCGGCGAGCGGAGGGCGGAGCGCGGCGCC
GGAGCCGAGGGCGCGCCGCGGAGGGGGTGCTGGGCGCGCTGTGCCCGGCCGGG
CGGCGGCTGCAAGAGGAGGCCGAGGCGAGCGGGGCGGCGGTGGGCGCGC
AGGGCGGCTCGCAGCTCGCAGCCGGGGCCGGGCCAGGCGTTCAGGCAGGTGATC
30 GGTGTGGCGGCGGCGGCGGCGGCGGCCCCAGACTCCCTCCGGAGTTCTTCTTGGG
GCTGATGTCCGCAAATATGCAGAATTACCGGCCGGGTGCTCCTGAAGCCAGCG
CGGGGAGCGAGCGCGGCGGCGGCCAGCACCGGGAACGCACCGAGGAAGAAGCC
CAGCCCCCGCCCTCCGCCCTTCCGTCCCCACCCCTACCCGGCGGCCCAGGAGG
CTCCCCGCGCTGCGGGCGCGCACTCCCTGTTTCTCCTCCTCCTGGCTGGCGCTGCC
35 TGCCTCTCCGCACTCACTGCTCGCGCCGGGCGCGCTCCGCCAGCTCCGTGCTCCC
CGCGCCACCCTCCTCCGGGCGCGCTCCCTAAGGGATGGTACTGAATTTGCGCCG
CACAGGAGACCGGCTGGAGCGCCCCGCCCGCGGCCTCGCCTCTCCTCCGAGCAG
CCAGCGCCTCGGGACGCGATGAGGACCTTGGCTTGCCTGCTGCTCCTCGGCTGCG
GATACCTCGCCCATGTTCTGGCCGAGGTTGGTGCCGCCCCCGCGCCCCGTCCCTG
40 CGCCGGCTCCTCCG

SEQ ID NO: 144

>gi|2217690|gb|AA487526.1|AA487526 ab20e09.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:841384 3', mRNA sequence

45 TTGTGGAAAACCTCAACCTTTATTATTACCTGCCTAGTGCAGGGGATTAAAATTGC
CTCAAGCTAGGTCCATATATTAGTG

SEQ ID NO: 145

>gi|219911|dbj|D12614.1|HUMLTNFB Human mRNA for lymphotoxin (TNF-beta),
complete cds

5 GCCCCATCTCCTTGGGCTGCCCCGTGCTTCGTGCTTTGGACTACCGCCCAGCAGTGT
CCTGCCCTCTGCCTGGGCCTCGGTCCCTCCTGCACCTGCTGCCTGGATCCCCGGCC
TGCCTGGGCCTGGGCCTTGGTTCTCCCCATGACACCACCTGAACGTCTCTTCCTCC
CAAGGGTGTGTGGCACCACCCTACACCTCCTCCTTCTGGGGCTGCTGCTGGTTCT
GCTGCCTGGGGCCCAGGGGCTCCCTGGTGTGTCCTCACACCTTCAGCTGCCCAG
10 ACTGCCCGTCAGCACCCCAAGATGCATCTTGCCACAGCACCTCAAACCTGCTG
CTCACCTCATTGGAGACCCAGCAAGCAGAACTCACTGCTCTGGAGAGCAAACA
CGGACCGTGCCTTCCTCCAGGATGGTTTCTCCTTGAGCAACAATTCTCTCCTGGTC
CCCACCAGTGGCATCTACTTCGTCTACTCCCAGGTGGTCTTCTCTGGGAAAGCCT
ACTCTCCCAAGGCCACCTCCTCCCCACTCTACCTGGCCCATGAGGTCCAGCTCTTC
TCCTCCCAGTACCCCTTCCATGTGCCTCTCCTCAGCTCCCAGAAGATGGTGTATCC
15 AGGGCTGCAGGAACCCTGGCTGCACTCGATGTACCACGGGGCTGCGTTCAGCTC
ACCCAGGGAGACCAGCTATCCACCCACACAGATGGCATCCCCCACCTAGTCCTCA
GCCCTAGTACTGTCTTCTTTGGAGCCTTCGCTCTGTAGAACTTGGAATAATCCAG
AAAGAAAAAATAATTGATTTCAAGACCTTCTCCCCATTCTGCCTCCATTCTGACC
ATTCAGGGGTCGTCACCACCTCTCCTTTGGCCATTCCAACAGCTCAAGTCTTCCC
20 TGATCAAGTCACCGGAGCTTTCAAAGAAGGAATTCTAGGCATCCCAGGGGACCA
CACCTCCCTGAACCATCCCTGATGTCTGTCTGGCTGAGGATTTCAGCCTGCCTA
GGAATTCCCAGCCCAAAGCTGTTGGTCTGTCCCACCAGCTAGGTGGGGCCTAGAT
CCACACACAGAGGAAGAGCAGGCACATGGAGGAGCTTGGGGGATGACTAGAGG
CAGGGAGGGGACTATTTATGAAGGCAAAAAAATTAAATTATTTATTTATGGAGG
25 ATGGAGAGAGGGGAATAATAGAAGAACATCCAAGGAGAAACAGAGACAGGCCC
AAGAGATGAAGAGTGAGAGGGCATGCGCACAAGGCTGACCAAGAGAGAAAGAA
GTAGGCATGAGGGATCACAGGGCCCCAGAAGGCAGGGAAAGGCTCTGAAAGCC
AGCTGCCGACCAGAGCCCCACACGGAGGCATCTGCACCCTCGATGAAGCCCAAT
AAACCTCTTTTCTCTG

30

SEQ ID NO: 146

>gi|1012035|gb|H59203.1|H59203 yr03c12.r1 Soares fetal liver spleen 1NFLS Homo sapiens
cDNA clone IMAGE:204214 5', mRNA sequence

35 AAAAGGAAGCTGTCTCGGGCATTGAACAAAGCTAAAAACTCCAGTGATGCCAAA
CTAGAACCAACAAATGTCCAAACCGTAACCTGTTCTCCTCGTGTAAGGCCCTGC
CTCTCAGCCCCAGGANACGTCTGGGCGATGACAACCTATGCAACACTCCCCATTT
ACCTCCTTGTCTCCACCAAAGCAAGGCAAGAAAGAGAATGGTCCCCCTCACTCA
CATACACTTAAGGGACGAAGATTGGTATTTGACAATCAGCTGACAATTAAGTCTC
CTAGCAAAAGAGAACTAGCCAAAGTTCACCAAAACAAAATACTTTCTTTTCAAGTTA
40 GGAAAAAGTCAAGGGNTTCACAACAAATTTTTGAGGCAGGGGTGTCCACTGAAG
GANAGGANTCTGGCTGCGTGGGGANTATTTCAAGGCAAGAAGGGCATTGCTAC
CNGCAGGCAAAGTTGGTNC

SEQ ID NO: 147

45 >gi|1162368|gb|N39161.1|N39161 yv26a01.s1 Soares fetal liver spleen 1NFLS Homo
sapiens cDNA clone IMAGE:243816 3' similar to gb:M98399 PLATELET
GLYCOPROTEIN IV (HUMAN);, mRNA sequence

TTAAGGAAGAACATATTTTAATGGTTGAAACCTGTCTTTATGAGGCGATTATGAC
AGCAAAAAATATTATAATGAATAACAATGCATAGTCTACGCTTTGTAATATTTCA

TACAATAATTCCTTTATCATTTACATCTCTTAATGCTAGAAAAGCATTCTGAAGAT
 GCCAAGCGTAAGTTGCAACTGAGTAAAAAAAAAAAAAGCAAAATTTACTCAATTT
 CCAGAAGAGGTCGAGAACAGAGAATGAAGGTCCTTAAATATAAACCGCTAGTG
 TGCTAAAATGATGTCCATTTGCAGGATCAGTGGACAAAATATTTAAGCCCATAAA
 5 GAAAAGAGTTATACCTGCTGTATGAAGGTATTCCATAGAGAAATATGAGTCATA
 AGCCAATTATTTATAAATGGCCTTCCAAATATTTGGT

SEQ ID NO: 148

>gi|1548486|gb|AA056148.1|AA056148 zf55d10.r1 Soares retina N2b4HR Homo sapiens
 10 cDNA clone IMAGE:380851 5' similar to TR:G1143719 G1143719 RS-REX-B. ;, mRNA
 sequence

CTGTCCTCGGAGCAGGCGGAGTAAAGGGACTTGAGCGAGCCAGTTGCCGGATTA
 TTCTATTTCCCTCCCTCTCTCCCGCCCCGTATCTCTTTTACCCTTCTCCCACCCT
 CGCTCGCGTANCATGGCGGACGTNNGGCGNCCACTCAGTCCCATTCATCTCCTC
 15 GTCGTCCTTCGGAGCCGAGCCGTCCGCGCCCGGCGCGGCGNGNAGCCANGGAGC
 CTGCCCCGCCCTGGGGACGAAGAGCTGCAGCTCCTCCTGTGCGGTGCAGATTCTG
 ATTTTCTGGAGAGATGTGAAGAAGACTGGGTTTGTCTTTGGCACCACGCTGATCA
 TGCTGCTTTCCCTGGCAGCTTTTCAAGTGTATCAGTGTGGATTTCTTACCTCATCT
 GGCTCTTCTCTGTACCATCAGCTTCAGGATCTACAAGTCCGTCATCCAAGCTG
 20 TACAGAAGTCAGAAGAAGGCCATCCATTCAAAGCCTACTGGACGTAGACATTAC
 TCTGTCTAGAAGTTTCATAATTACATGAATGTGCATGTGACATAACAGGGCCTGA
 AACNATATTCGTTNTTTGGTAGAAATTGGTTGATCTTGAAGT

SEQ ID NO: 149

>gi|545303|gb|S69200.1|S69200 EP3 prostanoid receptor isoform EP 3-II {alternatively
 25 spliced} [human, mRNA, 1682 nt]

AGAGAGGAAGGCGTGGCTCCCTCCCGGGCCAGTGAGCCCTGGCGCCCGCCGCGGC
 CGCGGTCCCAGCAGCGGAGTAGGGCGGCGGCTGCGCCCCGCACCATGGGGGGCA
 GCCAGCCCCAGCCGCGGTAAACGCCGACCTCCGCGCCGCGCCGCGCGCGTCT
 30 GCCCCCTCCCGCTGCGGCTCTCTGGACGCCATCCCCTCCTCACCTCGAAGCCAAC
 ATGAAGGAGACCCGGGGCTACGGAGGGGATGCCCCCTTCTGCACCCGCCTCAAC
 CACTCCTACACAGGCATGTGGGCGCCCGAGCGTTCCGCGAGGCGCGGGGCAAC
 CTCACGCGCCCTCCAGGGTCTGGCGAGGATTGCGGATCGGTGTCCGTGGCCTTCC
 CGATCACCATGCTGCTCACTGGTTTCGTGGGCAACGCACTGGCCATGCTGCTCGT
 35 GTCGCGCAGCTACCGGCGCCGGGAGAGCAAGCGCAAGAAGTCCTTCCTGCTGTG
 CATCGGCTGGCTGGCGCTACCGACCTGGTCGGGCGAGCTTCTACCAACCCCGGTC
 GTCATCGTCGTGTACCTGTCCAAGCAGCGTTGGGAGCACATCGACCCGTGCGGGGC
 GGCTCTGCACCTTTTTCGGGCTGACCATGACTGTTTTCGGGCTCTCCTCGTTGTTC
 ATCGCCAGCGCCATGGCCGTCGAGCGGGCGCTGGCCATCAGGGCGCCGCACTGG
 40 TATGCGAGCCACATGAAGACGCGTGCCACCCGCGCTGTGCTGCTCGGCGTGTGGC
 TGGCCGTGCTCGCCTTCGCCCTGCTGCCGGTGTGGGCGTGGGCCAGTACACCGT
 CCAGTGGCCCGGGACGTGGTGCTTCATCAGCACCGGGCGAGGGGGCAACGGGAC
 TAGCTCTTCGCATAACTGGGGCAACCTTTTCTTCGCTCTGCCTTTGCCTTCCTGG
 GGCTCTTGGCGCTGACAGTCACCTTTTCTGCAACCTGGCCACCATTAAAGGCCCT
 45 GGTGTCCCGCTGCCGGGCCAAGGCCACGGCATCTCAGTCCAGTGCCAGTGGGG
 CCGCATCACGACCGAGACGGCCATTACAGCTTATGGGGATCATGTGCGTGCTGTGCG
 GTCTGCTGGTCTCCGCTCCTGATAATGATGTTGAAAATGATCTTCAATCAGACAT
 CAGTTGAGCACTGCAAGACACACACGGAGAAGCAGAAAGAATGCAACTTCTTCT
 TAATAGCTGTTTCGCCTGGCTTCACTGAACCAGATCTTGGATCCTTGGGTTTACCTG

CTGTTAAGAAAGATCCTTCTTCGAAAGTTTTGCCAGGTAGCAAATGCTGTCTCCA
GCTGCTCTAATGATGGACAGAAAGGGCAGCCTATCTCATTATCTAATGAAATAAT
ACAGACAGAAGCATGAAAGAAAACACTTAACCTGCATGTGCACAGCTTCTGGTA
ACAAATATCGCTAAACCTTACTGTGAATTTAGGCATCTCTGGCATGCCACTGTTT
5 ATGCATTGAAGTGGAATTTTTGGTATAAAGCTAAATGGTCTTAGAAGCATAGAAA
ATCCCTATGTGCCAAAAGTAGTGAAACACAAACAAAGGAAAAATATATTAATAAC
AGTCTAGTGTTTTTTGTTGAGTCTGCCATTCTGATGCTGAATATGTGATTAATTATGT
GATGAAAACCTTTTTTTATAAATGATCTTGGTCTATTGGGG

10 SEQ ID NO: 150

>gi|4481752|gb|M86849.2|HUMGAPJUNC Homo sapiens connexin 26 (GJB2) mRNA,
complete cds

GATTTAATCCTATGACAAACTAAGTTGGTTCTGTCTTCACCTGTTTTGGTGAGGTT
GTGTAAGAGTTGGTGTCTGCTCAGGAAGAGATTTAAGCATGCTTGCTTACCCAGA
15 CTCAGAGAAGTCTCCCTGTTCTGTCCTAGCTATGTTCCCTGTGTTGTGTGCATTTCGT
CTTTTCCAGAGCAAACCGCCAGAGTAGAAGATGGATTGGGGCACGCTGCAGAC
GATCCTGGGGGGTGTGAACAAACACTCCACCAGCATTGGAAAGATCTGGCTCAC
CGTCCTCTTCATTTTTTCGCATTATGATCCTCGTTGTGGCTGCAAAGGAGGTGTGGG
GAGATGAGCAGGCCGACTTTGTCTGCAACACCCTGCAGCCAGGCTGCAAGAACG
20 TGTGCTACGATCACTACTTCCCCATCTCCACATCCGGCTATGGGCCCTGCAGCT
GATCTTCGTGTCCAGCCCAGCGCTCCTAGTGGCCATGCACGTGGCCTACCGGAGA
CATGAGAAGAAGAGGAAGTTCATCAAGGGGGAGATAAAGAGTGAATTTAAGGA
CATCGAGGAGATCAAAACCCAGAAGGTCCGCATCGAAGGCTCCCTGTGGTGGAC
CTACACAAGCAGCATCTTCTTCCGGGTCATCTTCGAAGCCGCCTTCATGTACGTCT
25 TCTATGTCATGTACGACGGCTTCTCCATGCAGCGGCTGGTGAAGTGCAACGCCTG
GCCTTGTCCCAACACTGTGGACTGCTTTGTGTCCCGGCCACGGAGAAGACTGTC
TTCACAGTGTTTCATGATTGCAGTGTCTGGAATTTGCATCCTGCTGAATGTCACTGA
ATTGTGTTATTTGCTAATTAGATATTGTTCTGGGAAGTCAAAAAAGCCAGTTTAA
CGCATTGCCAGTTGTTAGATTAAGAAATAGACAGCATGAGAGGGATGAGGGCAA
30 CCCGTGCTCAGCTGTCAAGGCTCAGTCGCCAGCATTTCCTCAACACAAAGATTCTG
ACCTTAAATGCAACCATTGAAACCCCTGTAGGCCTCAGGTGAAACTCCAGATGC
CACAATGAGCTCTGCTCCCCTAAAGCCTCAAAACAAAGGCCTAATTCTATGCCTG
TCTTAATTTTCTTTCACTTAAGTTAGTTCCACTGAGACCCCAGGCTGTTAGGGGTT
ATTGGTGTAAGGTACTTTCATATTTTAAACAGAGGATATCGGCATTTGTTTCTTTC
35 TCTGAGGACAAGAGAAAAAAGCCAGGTTCCACAGAGGACACAGAGAAGGTTTG
GGTGTCCTCCTGGGGTTCTTTTTGCCAACTTTCCCCACGTTAAAGGTGAACATTGG
TTCTTTCATTTGCTTTGGAAGTTTTAATCTCTAACAGTGGACAAAGTTACCAGTGC
CTTAAACTCTGTTACACTTTTTGGAAGTGAAAACCTTTGTAGTATGATAGGTTATTT
TGATGTAAAGATGTTCTGGATAACCATTATATGTTCCCCCTGTTTCAGAGGCTCAG
40 ATTGTAATATGTAAATGGTATGTCATTCGCTACTATGATTTAATTTGAAATATGGT
CTTTTGGTTATGAATACTTTGCAGCACAGCTGAGAGAGGCTGTCTGTTGTATTTCAT
TGTGGTCATAGCACCTAACAACATTGTAGCCTCAATCGAGTGAGACAGACTAGA
AGTTCCTAGTTGGCTTATGATAGCAAATGGCCTCATGTCAAATATTAGATGTAAT
TTTGTGTAAGAAATACAGACTGGATGTACCACCACTACTACCTGTAATGACAGG
45 CCTGTCCAACACATCTCCCTTTTCCATGCTGTGGTAGCCAGCATCGGAAAGAACG
CTGATTTAAAGAGGTGAGCTTGGGAATTTTATTGACACAGTACCATTTAATGGGG
AGACAAAAATGGGGGCCAGGGGAGGGAGAAGTTTCTGTCGTTAAAAACGAGTTT
GGAAAGACTGGACTCTAAATTCTGTTGATTAAAGATGAGCTTTGTCTACCTTCAA
AAGTTTGTTTGGCTTACCCCTTCAGCCTCCAATTTTTTAAGTGAAAATATAACTA

ATAACATGTGAAAAGAATAGAAGCTAAGGTTTAGATAAAATATTGAGCAGATCTA
TAGGAAGATTGAACCTGAATATTGCCATTATGCTTGACATGGTTTCCAAAAAATG
GTACTCCACATACTTCAGTGAGGGTAAGTATTTTCCTGTTGTCAAGAATAGCATT
GTAAAAGCATTTTGTAAATAATAAAGAATAGCTTTAATGATATGCTTGTAACATAA
5 ATAATTTTGTAAATGTATCAAATACATTTAAAACATTAAAATATAATCTCTATAAT

SEQ ID NO: 151

>205581R6

CAGAGGCTTGGAGGGGATGTGCAGAGCCCCAACTGCCCATCTGAGGATGTAGTC
10 ATCACTCCAGAAAGCTTTGGAAGAGATTTCATCCCTCACATGCCTGGCTGGGAATG
TCAGTGCATGTGACGCCCCCTATTCTCTCCTCTTCCAGGTCCCTAGACTGCAGGGA
GAGTGGCAAGAATGGGCCTCATGTGTACCAGGACCTCCTGCTTAGCCTTGGGACT
ACAAACAGCACGCTGCCCCCTCCATTTTCTCTCCAATCTGGAATCCTGACATTGA
ACCCAGTTGCTCAGGGTCAGCCCATTCTTACTTCCCTGGGATCAAATCAAGAAGA
15 AGCATATGTCACCATGTCCAGCTTCTACCAAAACCAGTGAAGTGTAAAGAAAACC
CCAGAACTGAACTTACCGTGAGCGACCAAAGATGATTTAAAAAGGGAAGTCTAG
AGTTCCTAGTCTCCCTAACAGCACCAGAGAAGACA

SEQ ID NO: 152

20 >3386845H1

TGCCTGTAAGAAACATGATATAACTGTCAAAAGGACAGAAAGTCAGCTACATCA
ATGGCAAGATGTGAGTAGTAGGTTCCGTTTGTACCAGGACAGTGCAGAAATGGC
AAATTTTCCCTCAATATGAAAAAAGAAACAAAGAAAATCTATGAGAAGTGCCA
CCACATGGACAGACCACCCCTCCCGCGGGCATGTGGTCTGCAGCCCCCTGCCCGTT
25 TCCAACAACCTTCCTCACTAACAGGCTTTCTCCTTC

SEQ ID NO: 153

>gi|29707|emb|X07549.1|HSCATH Human mRNA for cathepsin H (E.C.3.4.22.16.)

TTGCTGAAATAAAACACAAGTATCTCTGGTCAGAGCCTCAGAATTGCTCAGCCAC
30 CAAAAGTAACTACCTTCGAGGTACTGGTCCCTACCCACCTTCCGTGGACTGGCGG
AAAAAAGGAAATTTTGTCTCACCTGTGAAAAATCAGGGTGCCTGCGGCAGTTGCT
GGACTTTCTCCACCACTGGGGCCCTGGAGTCTGCAATCGCCATCGCAACCGGAAA
GATGCTGTCCTTGGCGGAACAGCAGCTGGTGGACTGCGCCCAGGACTTCAATAAT
TACGGCTGCCAAGGGGGTCTCCCCAGCCAGGCTTTCGAGTATATCCTGTACAACA
35 AGGGGATCATGGGTGAAGACACCTACCCCTACCAGGGCAAGGATGGTTATTGCA
AGTTCCAACCTGGAAAGGCCATCGGCTTTGTCAAGGATGTAGCCAACATCACAAT
CTATGACGAGGAAGCGATGGTGGAGGCTGTGGCCCTCTACAACCCTGTGAGCTTT
GCCTTTGAGGTGACTCAGGACTTCATGATGTATAGAACGGGCATCTACTCCAGTA
CTTCCTGCCATAAACTCCAGATAAAGTAAACCATGCAGTACTGGCTGTTGGGTA
40 TGGAGAAAAAATGGGATCCCTTACTGGATCGTGAAAACTCTTGGGGTCCCCA
GTGGGGAATGAACGGGTACTTCCTCATCGAGCGCGGAAAGAACATGTGTGGCCT
GGCTGCCTGCGCCTCCTACCCCATCCCTCTGGTGTGAGCCGTGGCAGCCGCAGCG
CAGACTGGCGGAGAAGGAGAGGAACGGGCAGCCTGGGCCTGGGTGGAAATCCT
GCCCTGGAGGAAGTTGTGGGGAGATCCACTGGGACCCCCAACATTCTGCCCTCAC
45 CTCTGTGCCAGCCTGGAAACCTACAGACAAGGAGGAGTTCCACCATGAGCTCA
CCCGTGTCTATGACGCAAAGATCACCAGCCATGTGCCTTAGTGTCTTCTTAACA
GACTCAAACCACATGGACCACGAATATTCTTTCTGTCCAGAAGGGGCTACTTTCCA
CATATAGAGCTCCAGGGACTGTCTTTTCTGTATTCTGCTGTTCAATAAACATTGAGT
GAGCACCTCCA

SEQ ID NO: 154

>gi|1927579|gb|AA284668.1|AA284668 zt24g06.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:714106 5' similar to gb:M15476 UROKINASE-TYPE

5 PLASMINOGEN ACTIVATOR PRECURSOR (HUMAN);
TTTTTCTGGACTGAAGCCTGCAGGAGTTAAAAAGGGCAGGGCATCTCCTGTGCAT
GGGTGAAGGGAGGGCCAGCTCCCCCGACGGTGGGCATTTGTGAGGCCCATGGTT
GAGAAATGAATAATTTCCCAATTAGGAAGTGTAACAGCTGAGGTCTCTTGAGGG
AGCTTAGCCAATGTGGGAGCAGCGGTTTGGGGAGCAGAGACACTAACGACTTCA
10 GGGCAGGGCTCTGATATTCATGAATGTATCAGGAAATATATATGTGTGTGTATG
TTTGCACACTTGTGTGTGGGCTGTGAGTGTAAGTGTGAGTAAGAGCTGGTGTCTG
ATTGTAAAGTCTAAATATTTCCCTTAAACTGGCGTGGACTGTGATGCCACACAGAG
TTGTCTTTCTGGGAGAGGTTATAGGTCACCCCTGGGGCCTTCTTGGTCCCCACGT
GACAGTGGCTGGGAATGTATTAGTCCTCAGCATGACCTGTGACAACACTGTCTCA
15 AGTTCCTTTCACATAGATGTCCGTTCTT

SEQ ID NO: 155

>gi|186496|gb|M59911.1|HUMINTA3A Human integrin alpha-3 chain mRNA, complete cds
AGGTGAACAGGTCCTCACGCCAGCTCCGCCCCCTCACGCGCTCTCGCCGGGACC
20 CCGCTTCCGCTGGCAGCCATGGGCCCCGGCCCCAGCCGCGCGCCCCGCGCCCCAC
GCCTGATGCTCTGTGCGCTCGCCTTGATGGTGGCGGCGCGGCTGCGTCGTCTC
CGCCTTCAACCTGGATACCCGATTCTGGTAGTGAAGGAGGCCGGGAACCCGGG
CAGCCTCTTCGGCTACTCGGTCGCCCTCCATCGGCAGACAGAGCGGCAGCAGCGC
TACCTGCTCCTGGCTGGTGCCCCCGGGAGCTCGCTGTGCCCGATGGCTACACCA
25 ACCGGACTGGTGTGTGTACCTGTGCCCACTCACTGCCACAAGGATGACTGTGA
GCGGATGAACATCACAGTGAAAAATGACCCTGGCCATCACATTATTGAGGACAT
GTGGCTTGGAGTGAAGTGTGGCCAGCCAGGGCCCTGCAGGCAGAGTTCTGGTCTGT
GCCCACCGCTACACCCAGGTGCTGTGGTCAGGGTCAGAAGACCAGCGGCGCATG
GTGGGCAAGTGCTACGTGCGAGGCAATGACCTAGAGCTGGACTCCAGTGATGAC
30 TGGCAGACCTACCACAACGAGATGTGCAATAGCAACACAGACTACCTGGAGACG
GGCATGTGCCAGCTGGGCACCAGCGGTGGCTTCACCCAGAACACTGTGTACTTCG
GCGCCCCCGGTGCCTACAACCTGGAAAGGAAACAGCTACATGATTCAGCGCAAGG
AGTGGGACTTATCTGAGTATAGTTACAAGGACCCAGAGGACCAAGGAAACCTCT
ATATTGGGTACACGATGCAGGTAGGCAGCTTCATCCTGCACCCCAAAAACATCAC
35 CATTGTGACAGGTGCCCCACGGCACCGACATATGGGCGCGGTGTTCTTGCTGAGC
CAGGAGGCAGGCGGAGACCTGCGGAGGAGGCAGGTGCTGGAGGGCTCGCAGGT
GGGCGCCTATTTTGGCAGCGCAATTGCCCTGGCAGACCTGAACAATGATGGGTG
GCAGGACCTCCTGGTGGGCGCCCCCTACTACTTCGAGAGGAAAGAGGAAGTAGG
GGGTGCCATCTATGTCTTCATGAACCAGGCGGGAACCTCCTTCCCTGCTCACCCC
40 TCACTCCTTCTTCATGGCCCCAGTGGCTCTGCCTTTGGTTTATCTGTGGCCAGCAT
TGGTGACATCAACCAGGATGGATTTCAAGGATATTGCTGTGGGAGCTCCGTTTGAA
GGCTTGGGCAAAGTGTACATCTATCACAGTAGCTCTAAGGGGCTCCTTAGACAGC
CCCAGCAGGTAATCCATGGAGAGAAGCTGGGACTGCCTGGGTGGGCCACCTTCG
GCTATTCCCTCAGTGGGCAGATGGATGTGGATGAGAACTTCTACCCAGACCTTCT
45 AGTGGGAAGCCTGTCAGACCACATTGTGCTGCTGCGGGCCCGGCCAGTCATCAA
CATCGTCCACAAGACCTTGGTGCCAGGCCAGCTGTGCTGGACCCTGCACTTTGC
ACGGCCACCTCTTGTGTGCAAGTGGAGCTGTGCTTTGCTTACAACCAGAGTGCCG
GGAACCCCAACTACAGGCGAAACATCACCTGGCCTACACTCTGGAGGCTGACA
GGGACCGCCGGCCGCCCGGGCTCCGCTTTGCCGGCAGTGAGTCCGCTGTCTTCCA

CGGCTTCTTCTCCATGCCCCGAGATGCGCTGCCAGAAGCTGGAGCTGCTCCTGATG
GACAACCTCCGTGACAACTCCGCCCCATCATCTCCATGAACTACTCTTTAC
CTTTGCGGATGCCCGATCGCCCCCGGCTGGGGCTGCGGTCCCTGGACGCCTACCC
GATCCTCAACCAGGCACAGGCTCTGGAGAACCACACTGAGGTCCAGTTCCAGAA
5 GGAGTGCGGGCCTGACAACAAGTGTGAGAGCAACTTGCAGATGCGGGCAGCCTT
CGTGTCAGAGCAGCAGCAGAAGCTGAGCAGGCTCCAGTACAGCAGAGACGTCCG
GAAATTGCTCCTGAGCATCAACGTGACGAACACCCGGACCTCGGAGCGCTCCGG
GGAGGACGCCCACGAGGCGCTGCTCACCTGGTGGTGCCTCCCGCCCTGCTGCTG
TCCTCAGTGCGCCCCCCCCGGGGCCTGCCAAGCTAATGAGACCATCTTTTGCGAGC
10 TGGGGAACCCCTTCAAACGGAACCAGAGGATGGAGCTGCTCATCGCCTTTGAGG
TCATCGGGGTGACCCTGCACACAAGGGACCTTCAGGTGCAGCTGCAGCTCTCCAC
GTCGAGTCACCAGGACAACCTGTGGCCCATGATCCTCACTCTGCTGGTGGACTAT
ACACTCCAGACCTCGCTTAGCATGGTAAATCACCGGCTACAAAGCTTCTTTGGGG
GGACAGTGATGGGTGAGTCTGGCATGAAAACCTGTGGAGGATGTAGGAAGCCCCC
15 TCAAGTATGAATTCCAGGTGGGCCCAATGGGGGAGGGGCTGGTGGGCCTGGGGA
CCCTGGTCCTAGGTCTGGAGTGGCCCTACGAAGTCAGCAATGGCAAGTGGCTGCT
GTATCCCACGGAGATCACCGTCCATGGCAATGGGTCCCTGGCCCTGCCGACCACCT
GGAGACCTTATCAACCCTCTCAACCTCACTCTTTCTGACCCTGGGGACAGGCCAT
CATCCCCACAGCGCAGGCGCCGACAGCTGGATCCAGGGGGAGGCCAGGGCCCCC
20 CACCTGTCACTCTGGCTGCTGCCAAAAAGCCAAGTCTGAGACTGTGCTGACCTG
TGCCACAGGGCGTGCCCACTGTGTGTGGCTAGAGTGCCCCATCCCTGATGCCCC
GTTGTACCAACGTGACTGTGAAGGCACGAGTGTGGAACAGCACCTTCATCGAG
GATTACAGAGACTTTGACCGAGTCCGGGTAAATGGCTGGGCTACCCTATTCTCC
GAACCAGCATCCCCACCATCAACATGGAGAACAAGACCACGTGGTTCTCTGTGG
25 ACATTGACTCGGAGCTGGTGGAGGAGCTGCCGGCCGAAATCGAGCTGTGGCTGG
TGCTGGTGGCCGTGGGTGCAGGGCTGCTGCTGCTGGGGCTGATCATCCTCCTGCT
GTGGAAGTGCGGCTTCTTCAAGCGAGCCCGCACTCGCGCCCTGTATGAAGCTAAG
AGGCAGAAGGCGGAGATGAAGAGCCAGCCGTGAGAGACAGAGAGGCTGACCGA
CGACTACTGAGGGGGCAGCCCCCGCCCCGGCCACCTGGTGTGACTTCTTTAA
30 GCGGACCCGCTATTATCAGATCATGCCCAAGTACCACGCAGTGCGGATCCGGGA
GGAGGAGCGCTACCCACCTCCAGGGAGCACCTGCCACCAAGAAGCACTGGGT
GACCAGCTGGCAGACTCGGGACCAATACTACTGACGTCCTCCCTGATCCCACCCC
CTCCTCCCCCAGTGTCCCTTTCTTCTTCTATTTATCATAAGTTATGCCTCTGACAGT
CCACAGGGGGCCACCACCTTTGGCTGGTAGCAGCAGGCTCAGGCACATACACCTC
35 GTCAAGAGCATGCACATGCTGTCTGGCCCTGGGGATCTTCCACAGGAGGGCCA
GCGCTGTGGACCTTACAACGCCGAGTGCATTCCTGTGCCCTAGATGCACG
TGGGGCCCACTGCTCGTGGACTGTGCTGGTGCATCACGGATGGTGCATGGGCTCG
CCGTGTCTCAGCCTCTGCCAGCGCCAGCGCCAAAACAAGCCAAAGAGCCTCCCA
CCAGAGCCGGGAGGAAAAGGCCCTGCAATGTGGTGACACCTCCCTTTTACAC
40 CTGGATCCATCTTGAGAGCCACAGTCACTGGATTGACTTTGCTGTCAAACTACT
GACAGGGAGCAGCCCCCGGGCCGCTGGCTGGTGGGCCCCCAATTGACACCCATG
CCAGAGAGGTGGGGATCCTGCCTAAGGTTGTCTACGGGGGCACTTGGAGGACCT
GGCGTGCTCAGACCCAACAGCAAAGGAAGTAGAAAGAAGGACCCAGAAGGCTT
GCTTTCCTGCATCTCTGTGAAGCCTCTCTCCTTGGCCACAGACTGAACTCGCAGG
45 GAGTGCAGCAGGAAGGAACAAAGACAGGCAAACGGCAACGTAGCCTGGGCTCA
CTGTGCTGGGGCATGGCGGGATCCTCCACAGAGAGGAGGGGACCAATTCTGGAC
AGACAGATGTTGGGAGGATACAGAGGAGATGCCACTTCTCACTCACCCTACCA
GCCAGCCTCCAGAAGGCCCCAGAGAGACCCTGCAAGACCACGGAGGGAGCCGA
CACTTGAATGTAGTAATAGGCAGGGGGCCCTGCCACCCCATCCAGCCAGACCCC

AGCTGAACCATGCGTCAGGGGCCTAGAGGTGGAGTTCTTAGCTATCCTTGGCTTT
CTGTGCCAGCCTGGCTCTGCCCCCTCCCCCATGGGCTGTGTCCTAAGGCCCATTTG
AGAAGCTGAGGCTAGTTCCAAAAACCTCTCCTGACCCCTGCCTGTTGGCAGCCCA
CTCCCCAGCCCCAGCCCCCTTCCATGGTACTGTAGCAGGGGAATTCCCTCCCCCTC
5 CTTGTGCCTTCTTTGTATATAGGCTTCTCACCGCGACCAATAAACAGCTCCCAGTT
TGT

SEQ ID NO: 156

>gi|189204|gb|M14764.1|HUMNGFR Human nerve growth factor receptor mRNA, complete
10 cds

GCCGCGGCCAGCTCCGGCGGGCAGGGGGGGCGCTGGAGCGCAGCGCAGCGCAG
CCCCATCAGTCCGCAAAGCGGACCGAGCTGGAAGTCGAGCGCTGCCGCGGGAGG
CGGGCGATGGGGGCAGGTGCCACCGGCCGCGCCATGGACGGGGCCGCGCCTGCTG
CTGTTGCTGCTTCTGGGGGTGTCCCTTGAGAGGTGCCAAGGAGGCATGCCCCACAG
15 GCCTGTACACACACAGCGGTGAGTGCTGCAAAGCCTGCAACCTGGGCGAGGGTG
TGGCCCAGCCTTGTGGAGCCAACAGACCGTGTGTGAGCCCTGCCTGGACAGCGT
GACGTTCTCCGACGTGGTGAGCGCGACCGAGCCGTGCAAGCCGTGCACCGAGTG
CGTGGGGCTCCAGAGCATGTCGGCGCCGTGCGTGGAGGGCCGACGACGCCGTGTG
CCGCTGCGCCTACGGCTACTACCAGGATGAGACGACTGGGCGCTGCGAGGCGTG
20 CCGCGTGTGCGAGGCGGGCTCGGGCCTCGTGTTCTCCTGCCAGGACAAGCAGAA
CACCGTGTGCGAGGAGTGCCCCGACGGCACGTATTCCGACGAGGCCAACACGT
GGACCCGTGCCTGCCCTGCACCGTGTGCGAGGACACCGAGCGCCAGCTCCGCGA
GTGCACACGCTGGGCCGACGCCGAGTGCGAGGAGATCCCTGGCCGTTGGATTAC
ACGGTCCACACCCCCAGAGGGCTCGGACAGCACAGCCCCCAGCACCCAGGAGCC
25 TGAGGCACCTCCAGAACAAGACCTCATAGCCAGCACGGTGGCAGGTGTGGTGAC
CACAGTGATGGGCAGCTCCCAGCCCGTGGTGACCCGAGGCACCAACCGACAACCT
CATCCCTGTCTATTGCTCCATCCTGGCTGCTGTGGTTGTGGGCCTTGTGGCCTACA
TAGCCTTCAAGAGGTGGAACAGCTGCAAGCAGAACAAAGCAAGGAGCCAACAGC
CGGCCAGTGAACCAGACGCCCCCACCAGAGGGAGAAAACTCCACAGCGACAGT
30 GGCATCTCCGTGGACAGCCAGAGCCTGCATGACCAGCAGCCCCACACGCAGACA
GCCTCGGGCCAGGCCCTCAAGGGTGACGGAGGCCTCTACAGCAGCCTGCCCCCA
GCCAAGCGGGAGGAGGTGGAGAAGCTTCTCAACGGCTCTGCGGGGGACACCTGG
CGGCACCTGGCGGGCGAGCTGGGCTACCAGCCGAGCACATAGACTCCTTTACC
CATGAGGCCTGCCCCGTTTCGCGCCCTGCTTGCAAGCTGGGCCACCCAGGACAGCG
35 CCACACTGGACGCCCTCCTGGCCGCCCTGCGCCGCATCCAGCGAGCCGACCTCGT
GGAGAGTCTGTGCAGTGAGTCCACTGCCACATCCCCGGTGTGAGCCCAACCGGG
GAGCCCCCGCCCCGCCCCACATTCCGACAACCGATGCTCCAGCCAACCCCTGTGG
AGCCCCGACCCCCACCCCTTTGGGGGGGGCCCGCCTGGCAGAACTGAGCTCCTCTG
GGCAGGACCTCAGAGTCCAGGCCCCAAAACACAGCCCTGTCAGTGCAGCCCGT
40 GTGGCCCCCTTCACTTCTGACCACACTTCCTGTCCAGAGAGAGAAGTGCCCTGTCT
GCCTCCCCAACCCTGCCCTGCCCGGTCACCATCTCAGGCCACCTGCCCCCTTCTC
CCACACTGCTAGGTGGGCCAGCCCCTCCCACCACAGCAGGTGTCATATATGGGG
GGCCAACACCAGGGATGGTACTAGGGGGGAAGTGACAAGGCCCCAGAGACTCAG
AGGGAGGAATCGAGGAACCAGAGCCATGGACTCTACACTGTGAACTTGGGGAAC
45 AAGGGTGGCATCCCAGTGGCCTCAACCCTCCCTCAGCCCCTCTTGCCCCCACC
CAGCCTAAGATGAAGAGGATCGGAGGCTTGTGAGAGCTGGGAGGGGTTTTTCGAA
GCTCAGCCCACCCCCCTCATTTTGGATATAGGTCAGTGAGGCCAGGGAGAGGCC
ATGATTCGCCCAAAGCCAGACAGCAACGGGGAGGCCAAGTGACAGGCTGGCACCG
CCTTCTCTAAATGAGGGGCCTCAGGTTTGCTGAGGGCGAGGGGAGGGTGGCAG

GTGACCTTCTGGGAAATGGCTTGAAGCCAAGTCAGCTTTGCCTTCCACGCTGTCT
CCAGACCCCCACCCCTTCCCCACTGCCTGCCACCCGTGGAGATGGGATGCTTGC
CTAGGGCCTGGTCCATGATGGAGTCAGGTTTGGGGTTCGTGGAAAGGGTGCTGCT
TCCCTCTGCCTGTCCCTCTCAGGCATGCCTGTGTGACATCAGTGGCATGGCTCCA
5 GTCTGCTGCCCTCCATCCCGACATGGACCCGGAGCTAACACTGGCCCCCTAGAATC
AGCCTAGGGGTCAGGGACCAAGGACCCCTCACCTTGCAACACACAGACACACGC
ACACACACACACAGGAGGAGAAATCTCACTTTTCTCCATGAGTTTTTTCTCTTGG
GCTGAGACTGGATACTGCCCCGGGGCAGCTGCCAGAGAAGCATCGGAGGGAATTG
AGGTCTGCTCGGCCGTCTTCACTCGCCCCGGGTTTGGCGGGCCAAGGACTGCCG
10 ACCGAGGCTGGAGCTGGCGTCTGTCTTCAAGGGCTTACACGTGGAGGAATGCTCC
CCCATCCTCCCCTTCCCTGCAAACATGGGGTTGGCTGGGCCCAGAAGGTTGCGAT
GAAGAAAAGCGGGCCAGTGTGGGAATGCGGCAAGAAGGAATTGACTTCGACTGT
GACCTGTGGGGATTCTCCAGCTCTAGACAACCCTGCAAAGGACTGTTTTTTCC
TGAGCTTGGCCAGAAGGGGGCCATGAGGCCTCAGTGGACTTTCCACCCCCTCCCT
15 GGCCTGTTCTGTTTTGCCTGAAGTTGGAGTGAGTGTGGCTCCCCTCTATTTAGCAT
GACAAGCCCCAGGCAGGCTGTGCGCTGACAACCACCGCTCCCCAGCCCAGGGTT
CCCCCAGCCCTGTGGAAGGGACTAGGAGCACTGTAGTAAATGGCAATTCTTTGAC
CTCAACCTGTGATGAGGGGAGGAACTCACCTGCTGGCCCCCTCACCTGGGCACCT
GGGGAGTGGGACAGAGTCTGGGTGTATTTATTTTCTCCCCAGCAGGTGGGGAG
20 GGGGTTTGGTGGCTTGCAAGTATGTTTTAGCATGTGTTTGGTTCTGGGGCCCCCTT
TTACTCCCCTTGAGCTGAGATGGAACCCTTTTGGCCCCCAGCTGGGGGCCATGAG
CTCCAGACCCCCAGCAACCCTCCTATCACCTCCCCTCCTTGCTCCTGTGTAATCA
TTTCTTGGGGCCCTCCTGAACTTACACACAAAACGTTAAGTGATGAACATTAAAT
AGCAAAG

25

SEQ ID NO: 157

>873 BLOOD 234929.1 U34038 g1041728 Human protease-activated receptor-2 mRNA,
complete cds. 0

CACGAGCCCTGGGGAGGCGCGCAGCAGAGGCTCCGATTCGGGGCAGGTGAGAG
30 GCTGACTTTCTCTCGGTGCGTCCAGTGGAGCTCTGAGTTTCGAATCGGTGGCGGC
GGATTCCCCGCGCGCCCGGCGTCGGGGCTTCCAGGAGGATGCGGAGCCCCAGCG
CGGCGTGGCTGCTGGGGGGCCGCCATCCTGCTAGCAGCCTCTCTCTCCTGCAGTGG
CACCATCCAAGGAACCAATAGATCCTCTAAAGGAAGAAGCCTTATTGGTAAGGT
TGATGGCACATCCCACGTCACTGGGAAAAGGAGTTACAGTTGAAACAGTCTTTTC
35 TGTGGATGAGTTTTCTGCATCTGTCTCACTGGAAAAGTACCCTGTCTTCTCCTC
CAATTGTCTACACAATTGTGTTTGTGGTGGGGTTTGCAAGTAACGGCATGGCCCT
GTGGGTCTTTCTTTTCCGAACCTAAGAAGAAGCACCCCTGCTGTGATTACATGGCC
AATCTGGCCTTGGCTGACCTCCTCTCTGTCTGCTGCTTCCCCTGAAGATTGCCTA
TCACATACATGGCAACAACCTGGATTTATGGGGAAGCTCTTTGTAATGTGCTTATT
40 GGCTTTTTCTATGGCAACATGTACTGTTCCATTCTCTTCATGACCTGCCTCAGTGT
GCAGAGGTATTGGGTCATCGTGAACCCCATGGGGCACTCCAGGAAGAAGGCAAA
CATTGCCATTGGCATCTCCCTGGCAATATGGCTGCTGATTCTGCTGGTCACCATCC
CTTTGTATGTCGTGAAGCAGACCATCTTCATTCCCTGAACATCACGACCTGT
CATGATGTTTTGCCTGAGCAGCTCTTGGTGGGAGACATGTTCAATTACTTCCTCTC
45 TCTGGCCATTGGGGTCTTTCTGTTCCCAGCCTTCCTCACAGCCTCTGCCTATGTGC
TGATGATCAGAATGCTGCGATCTTCTGCCATGGATGAAAAGTCAAGAGAAGAAAA
GGAAGAGGGCCATCAAACCTCATTGTCACCTGTCCTGGCCATGTACCTGATCTGCTT
CACTCCTAGTAACCTTCTGCTTGTGGTGCATTATTTTCTGATTAAGAGCCAGGGCC
AGAGCCATGTCTATGCCCTGTACATTGTAGCCCTCTGCCTCTCTACCCTTAACAGC

TGCATCGACCCCTTTGTCTATTACTTTGTTTCACATGATTTTCAGGGATCATGCAAA
GAACGCTCTCCTTTGCCGAAGTGTCCGCACTGTAAAGCAGATGCAAGTATCCCTC
ACCTCAAAGAAACACTCCAGGAAATCCAGCTCTTACTCTTCAAGTTCAACCACTG
TTAAGACCTCCTATTGAGTTTTCCAGGTCCTCAGATGGGAATTGCACAGTAGGAT
5 GTGGAACCTGTTTAATGTTATGAGGACGTGTCTGTTATTTCTAATCAAAAAGGT
CTCACCACATAACCATGTGGATGCAGCACCTCTCAGGATTGCTAGGAGCTCCCCTG
TTTGCATGAGAAAAGTAGTCCCCCAAATTAACATCAGTGTCTGTTTCAGAATCTC
TCTACTCAGATGACCCCAAGAACTGAACCAACAGAAGCAGACTTTTCAGAAGAT
GGTGAAGACAGAAACCCAGTAACCTTGCAAAAAGTAGACTTGGTGTGAAGACTCA
10 CTTCTCAGCTGAAATTATATATATACACATATATATATTTTACATCTGGGATCATG
ATAGACTTGTTAGGGCTTCAAGGCCCTCAGAGATGATCAGTCCAACCTGAACGACC
TTACAAATGAGGAAACCAAGATAAATGAGCTGCCAGAATCAGGTTTTCAATCAA
CAGCAGTGAGTTGGGATTGGACAGTAGAATTTCAATGTCCAGTGAGTGAGGTTCT
TGTACCACTTCATCNN
15 NNN
NN
NN
NN
NNNTAAAAT
20 AGTCGTGAATCTTGTTCAAATGCAGATTCCTCAGATTCAATAATGAGAGCTCAG
ACTGGGAACAGGGCCCAGGAATCTGTGTGGTACAAACCTGCATGGTGTATTATGC
ACACAGAGATTTGAGAACCATTGTTCTGAATGCTGCTTCCATTTGACAAAGTGCC
GTGATAATTTTTGAAAAGAGAAGCAAACAATGGTGTCTCTTTTATGTTTCAGCTTA
TAATGAAATCTGTTTGTGACTTATTAGGACTTTGAATTATTTCTTTATTAACCT
25 CTGAGTTTTTGTATGTATTATTATTAAGAAAAATGCAATCAGGATTTTAAACAT
GTAAATACAAATTTTGTATAACTTTTGATGACTTCAGTGAAATTTTCAGGTAGTCT
GAGTAATAGATTGTTTGGCACTTAGAATAGCATTGCGCACTTAGTATTTTAAAA
AATAATTGTTGGAGTATTTATTGTCAGTTTGTTCACCTGTTATCTAATACAAAAT
TATAAAGCCTTCAGAGGGTTTGGACCACATCTCTTTGGAAAATAGTTTGCAACAT
30 ATTTAAGAGATACTTGATGCCAAAATGACTTTATACAACGATTGTATTTGTGACT
TTTAAAAATAATTATTTTATTGTGTAATTGATTATATAAATAACAAAATTTTTTTAC

SEQ ID NO: 158

>279279H1

35 AGCACACCAAGGAGTGATTTTNAAACTTACTCTGTTTTCTN'TTTCCCAACAAGA
TTATCATTTCCCTTTAAAAAAAATAGTTATCCTGGGGCATAACGCCATACCATTNT
GAAGGTGTCTTATCTCCTCTGATCTAGAGAGCACCATGAAGCTTCTCACGGGCCT
GGTTTTNTGCTCCTTGGTCCTGGGTGTCAGCAGCCGAAGCTTCTTTTCGTTCCCTTG
G

40

SEQ ID NO: 159

>gi|340155|gb|K03226.1|HUMUKM1 Human preprourokinase mRNA, complete cds

TCCACCTGTCCCCGCAGCGCCGGCTCGCGCCCTCCTGCCGCAGCCACCGAGCCGC
CGTCTAGCGCCCCGACCTCGCCACCATGAGAGCCCTGCTGGCGCGCCTGCTTCTC
45 TGCCTCCTGGTTCGTGAGCGACTCCAAAGGCAGCAATGAACTTCATCAAGTTCCAT
CGAACTGTGACTGTCTAAATGGAGGAACATGTGTGTCCAACAAGTACTTCTCCAA
CATTCACTGGTGCAACTGCCCAAAGAAATTCGGAGGGCAGCACTGTGAAATAGA
TAAGTCAAAAACCTGCTATGAGGGGAATGGTCACTTTTACCGAGGAAAGGCCAG
CACTGACACCATGGGCGGCCCTGCCTGCCCTGGAACCTCTGCCACTGTCCTTCAG

CAAACGTACCATGCCCCACAGATCTGATGCTCTTCAGCTGGGCCTGGGGAAACATA
ATTACTGCAGGAACCCAGACAACCGGAGGCGACCCTGGTGCTATGTGCAGGTGG
GCCTAAAGCCGCTTGTCCAAGAGTGCATGGTGCATGACTGCGCAGATGGAAAAA
AGCCCTCCTCTCCTCCAGAAGAATTAATAATTCAGTGTGGCCAAAAGACTCTGAG
5 GCCCCGCTTTAAGATTATTGGGGGAGAATTCACCACCATCGAGAACCAGCCCTGG
TTTGCGGCCATCTACAGGAGGCACCGGGGGGGCTCTGTACCTACGTGTGTGGAG
GCAGCCTCATCAGCCCTTGCTGGGTGATCAGCGCCACACACTGCTTCATTGATTA
CCCAAAGAAGGAGGACTACATCGTCTACCTGGGTGCTCAAGGCTTAACTCCAA
CACGCAAGGGGAGATGAAGTTTGAGGTGGAAAACCTCATCCTACACAAGGACTA
10 CAGCGCTGACACGCTTGCTCACCACAACGACATTGCCTTGCTGAAGATCCGTTCC
AAGGAGGGCAGGTGTGCGCAGCCATCCCGGACTATACAGACCATCTGCCTGCCC
TCGATGTATAACGATCCCCAGTTTGGCACAAGCTGTGAGATCACTGGCTTTGGAA
AAGAGAATTCTACCGACTATCTCTATCCGGAGCAGCTGAAGATGACTGTTGTGAA
GCTGATTTCCCACCGGGAGTGTGAGCAGCCCCACTACTACGGCTCTGAAGTCACC
15 ACCAAAATGCTGTGTGCTGCTGACCCACAGTGGAAAACAGATTCCTGCCAGGGA
GACTCAGGGGGACCCCTCGTCTGTTCCCTCCAAGGCCGCATGACTTTGACTGGAA
TTGTGAGCTGGGGCCGTGGATGTGCCCTGAAGGACAAGCCAGGCGTCTACACGA
GAGTCTCACACTTCTTACCCTGGATCCGCAGTCACACCAAGGAAGAGAATGGCCT
GGCCCTCTGAGGGTCCCCAGGGAGGAAACGGGCACCACCCGCTTTCTTGCTGGTT
20 GTCATTTTTGCAGTAGAGTCATCTCCATCAGCTGTAAGAAGAGACTGGGAAGAT

SEQ ID NO: 160

>4727571H1

GGCTCAGCCTGGAGGGACCCAACCAGAGCCTGGCCTGGGAGCCAGGATGGCCAT
25 CCACAAAGCCTTGGTGATGTGCCTGGGACTGCCTCTCTTCTGTTCCAGGGGCC
TGGGCCCAGGGCCATGTCCCACCCGGCTGCAGCCAAGGCCTCAAGCCCCTGTACT
ACAACCTGTGTGACCGCTCTGGGGCGTGGGGCATCGTCCCTGGACGCCGTTGCTGG
GGCGGGCATTGTCACCACGTTTGTGCTCACCATCATCCT

30 SEQ ID NO: 161

>2135769H1

GCTCGCGTCGCATTTGGCCGCCTCCCTACCGCTCCAAGCCCAGCCCTCAGCCATG
GCATGCCCCCTGGATCAGGCCATTGGCCTCCTCGTGGCCATCTTCCACAAGTACT
CCGGCAGGGAGGGTGACAAGCACACCCTGAGCAAGAAGGAGCTGAAGGAGCTG
35 ATCCAGAAGGAGCTCACCATTGGCTCGAAGCTGCAGGATGCTGAAATTGCAAGG
CTGATGGAAGACTTGACCGGAACAAGGACCAGGAGGTGAACTTCCAGGAGTAT
GTCACCTTCCCTGGGGGC

SEQ ID NO: 162

40 >gi|2179161|gb|AA456585.1|AA456585 zx73c10.s1 Soares ovary tumor NbHOT Homo
sapiens cDNA clone IMAGE:809394 3' similar to SW:RECQ_HUMAN P46063 ATP-
DEPENDENT DNA HELICASE Q1. ; mRNA sequence

TCTTTAAAGGCTTTATTTGCATTCTTGTAATTTTATTATTTCAAGTCAATGTGTTA
AGAATTACTGCGCATATAGTTATTTCTTTTATAAATTTGTTTTCCGTGATTCCTTC
45 AAAAGCTTTCTTATTGTTGGCCTTTATTTTCTGCAGAGAAGACTACAGTTTACAG
CTTATGCTACCATTTTCGTATTTGAAAATAGGACCTAAAGCTAATCTTCTGAACAA
TGAGGCACATGCTATTACTATGCAAGTGACAAAGTCCACGCAGAACTCTTTCAGG
GTAAATGGCTATTAATTTTCAGTTTTATATATT

SEQ ID NO: 163

>1452259F6

CTGGTTCAATTTTTACAGGAATTCAGTAAGATAAATACTATTCTCTGAATTCAAA
AAACAACCTTCTTCAGGGCCACAAAACACTGGGGATAAAGACAAGAAGAACTACA
5 GCAGGGGTCCCCACCTACTCGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAGGTGATTCTGATCGGATGTTACATAG
CCATATCCAGGTACATCCACAAATCCAGCAGGCAATTCATAAGTCAGTCAAGCC
GANAGCGAAAACATAACCAGAGCATCAGGGTTGTTGTGGCTGTGTTTTTTACCTG
CTTTCTATCATATCACTTGTGCAGAATTCCTTTTACTTTTAGTCACTTAGACTAGG
10 CTTTLAGATGAATCTGCACAA

SEQ ID NO: 164

>1650566F6

CAATTCAGGCAACAGGAGCNANGGGCCAGGAAAGAACACCACCCTTTCACAATG
15 AATTTGACACAATTGTCTTGCCGGTGCTTTATCTCATTATATTTGTGGCAAGCATC
TTGCTGAATGGTTTAGCAGTGTGGATCTCTTCCACATTAGGAATAAAACCAGCTT
CATATTCTATCTCAAAAACATAGTGGTTGCAGACCTCATAATGACGCTGACATTT
CCATTTCGAATAGTCCATGATGCAGGATTTGGACCTTGGTACTTCAAGTTTATTCC
CTGCAGATACACCTCAGTTTTGTTTTATGCAAACATGTATACTTCCATCGTG
20

SEQ ID NO: 165

>gi|2177519|gb|AA454743.1|AA454743 zx77e01.s1 Soares ovary tumor NbHOT Homo
sapiens cDNA clone IMAGE:809784 3', mRNA sequence

AGCTTTTTTTTTTTCATAATAAAATGCATTCTTTATTGAGTGCATGGTGGCCCAGGT
25 GCTATTCCATGTATGTCATAGGTGTGAACTTTAAATCTTTCCAACAGCCACTGC
CTTATGGAGACTGTATCATCCTTATCTTCATCTTACAGGTGAGAAATCTGCAGTG
AAGAAAGGTACATCCCAAG

SEQ ID NO: 166

30 >gi|2072424|gb|U83115.1|HSU83115 Human non-lens beta gamma-crystallin like protein
(AIM1) mRNA, partial cds

CAGCTCCGAGGGGAGTCGGACCGGAGCAAACAGCCACCCCCGGCTTCGTCCCCC
ACGAAGAGGAAGGGCAGGAGCCGTGCCCTCGAGGCCGTGCCCGCCCCGCCGCC
AGCGGCCCCCGGGCTCCCGCCAAGGAGTCCCCACCCAAGAGGGTGCCCGATCCC
35 AGCCAGTCACCAAGGGCACTGCGGCCGAGAGCGGGGAGGAGGCGGCGCGGGC
CATCCCCCGCGAGCTCCCGGTCAAGAGCAGCTCGCTGCTGCCGGAGATCAAGCC
CGAGCACAAGAGGGGGCCCGCTCCCCAACCACTTCAACGGCCGGGCAGAGGGAGG
TCGAAGCAGAGAGCTGGGCAGAGCGGCCGGAGCGCCTGGAGCTTCTGACGCCGA
CGGCTTGAAGCCCAGGAACCATTTTCGGCGTGGGCAGGTGCACAGTGACCACTAA
40 AGTGACCCTCCCTGCCAAGCCCAAACATGTGGAATAAATCTTAAAACCCCTAAG
AATCTTGACAGTTTGGGAAATGAGCACAATCCATTTAGCCAGCCAGTTCACAAAG
GCAACACTGCCACCAAAATCTCCTTATTTGAAAACAAACGGACAAACAGTAGCC
CAAGACACACTGACATTCGAGGGCCCAAGGAATACTCCTGCCTCTAGTAAAACGTT
TGTTGGGAGGGCAAAGCTGAATTTAGCCAAAAAAGCCAAAGAAATGGAGCAACC
45 TGAAAAGAAAGTAATGCCAAACAGTCCCCAGAATGGTGTGCTGGTTAAGGAAAC
TGCTATAGAAACCAAAGTTACCGTCTCGGAAGAAGAGATTCTGCCAGCAACCAG
AGGAATGAATGGAGACTCTTCTGAGAATCAAGCTCTTGGTCCTCAGCCTAACCAA
GATGATAAAGCAGATGTACAAACAGATGCTGGCTGCCTTTCAGAACCAGTGGCT
TCTGCTCTGATTCTGTCAAGGATCATAAGCTCTTAGAGAAGGAGGACTCAGAGG

CTGCAGACAGCAAAAAGCCTTGTACTTGAAAATGTAACCGATACAGCACAAAGACA
TCCCCACCACTGTGGATACCAAAGATTTACCTCCAACGGCCATGCCAAAGCCACA
GCATACATTTTCTGACTCACAGTCCCCTGCTGAGTCATCTCCTGGGCCTTCTCTTT
CACTGTCTGCACCCGCTCCTGGGGATGTTCCCAAAGACACATGTGTTCAATCACC
5 CATAAGCAGTTTCCCATGCACTGATCTAAAAGTGTGAGAAAACCATAAAGGATG
TGTTTTGCCTGTGTCTCGTCAGAACAAATGAGAAAATGCCACTTTTAGAACTTGGA
GGAGAAACAACCCCTCCTTTGTCCACAGAGCGTAGTCCAGAAGCTGTGGGAAGT
GAGTGTCCATCCAGAGTCCTCGTCCAGGTCAGGTCCTTCGTGCTCCCCGTGGAGA
GCACCCAGGATGTGAGCTCCCAGGTCATCCAGAGAGCTCTGAAGTTAGAGAAG
10 TGCAGTTGCCAACTTGTACAGTAATGAACCTGAAGTGGTTTCCGTTGCAAGTTG
TGCTCCCCACAAGAGGAAGTACTGGGCAATGAACACTCTCATTGCACAGCAGA
GCTCGCGGCAAAATCTGGCCCAAGTCATACCGCCAGCATCAGAGAAAATCTCT
GCCTATTCAGGCTCAAAGTCAGGGCAGCAGAACACCCCTGATGGCTGAATCCAG
TCCCACCAACTCTCCCAGCAGCGGAAATCACTTAGCCACTCCTCAAAGGCCAGAT
15 CAGACTGTTACAAATGGCCAGGATAGCCCTGCCAGCCTTTTGAACATTTCTGCTG
GTAGTGATGATAGTGTATTTGATTCTTCTTCTGATATGGAAAAATTCACTGAAATT
ATAAAACAGATGGATAGCGCAGTTTGTATGCCCATGAAAAGAAAGAAGGCCAGG
ATGCCAACTCTCCTGCTCCTCACTTTGCCATGCCTCCTATTCACGAAGACCATT
AGAAAAGGTGTTTGATCCCAAAGTGTTTACCTTTGGTTTGGGGAAGAAGAAGGA
20 AAGTCAGCCAGAAATGTCACCGGCTTTACATTTGATGCAGAACCTTGACACAAA
ATCCAAACTGAGACCCAAACGTGCATCTGCTGAACAGAGCGTCCTCTTCAAGTCC
CTGCACACCAACACTAATGGGAACAGTGAGCCTCTGGTGATGCCGGAAATCAAT
GACAAAGAGAACAGGGACGTCACAAATGGTGGCATTAAAGAGATCGAGACTAGA
AAAAAGTGCACTTTTCTCAAGCTTGTTATCTTCTTTACCACAAGACAAAATCTTTT
25 CTCCTTCTGTGACATCAGTCAACACTATGACCACGGCTTTCAGTACTTCTCAGAA
CGGTTCCCTATCTCAGTCTTCAGTGTACAGCCACGACTGAGGGTGCCCCGCC
TGTGGTTTGAACAAAGAACAGTCAAATCTTCTGCCCGACAACTCCTTAAAGGTCT
TCAATTTCAACTCGTCAAGTACATCACACTCCAGTTTGAAAAGTCCAAGCCACAT
GGAAAAATACCCGCAAAAAGAGAAAACCAAAGAAGATCTGGATTACGAAGCA
30 ACCTACACTTGCCAGAACTAAATTTTCTGAATTGTCAAACTGAAGAATGATGA
TATGGAAAAGGCTAATCATATTGAAAGTGTTATTAAATCAAACCTTGCCAACTGT
GCAAACAGTGACACCGACTTCATGGGTCTTTTCAAATCAAGCCGGTATGACCCAA
GCATTTCTTTTTCTGGAATGTCATTATCAGACACAATGACACTTAGAGGAAGTGT
CCAAAATAAACTCAATCCCCGACCTGGAAAGGTAGTGATATATAGTGAACCCGA
35 CGTCTCTGAGAAGTGCATTGAAGTTTTAGTGACATTGAGGATTGCAGTTCTTGG
AGCCTCTCTCCAGTGATACTCATAAAAGTTGTTAGAGGATGTTGGATTTTGTATG
AGCAACCAAATTTTGAAGGGCACTCCATCCCCTTAGAAGAAGGAGAATTGGAAC
TCTCTGGTCTCTGGGGTATAGAAGACATTTTGGAAAGGCACGAAGAAGCAGAGT
CTGATAAGCCAGTGGTGATTGGTTCATCAGACATGTGGTTCAGGATTACAGAGT
40 TAGTCACATTGACTTATTTACTGAACCAGAAGGGTTAGGAATCCTAAGTTCCTAC
TTTGATGATACTGAAGAAATGCAGGGATTGGTGTAATGCAGAAGACTTGTTCCA
TGAAAGTACATTGGGGCACGTGGCTGATTTATGAAGAACCTGGATTTGAGGGTGT
TCCTTTCATCCTGGAACCTGGTGAATACCCTGACTTGTCTTCTGGGATACAGAA
GCAGCGTACATTGGATCCATGCGGCCTCTGAAAATGGGTGGCCGTAAAGTTGAA
45 TTCCCTACAGATCCAAAGGTAGTTGTTTATGAAAAGCCTTTCTTTGAAGGAAAAT
GTGTGGAAGTGAAGAACAGGAATGTGTAGTTTTGTGTCATGGAGGGAGGTGAAACAG
AAGAGGCGACTGGAGACGATCATTTGCCGTTTACGTCAGTGGGGTCTATGAAAG
TTCTAAGAGGCATTTGGGTGTCATATGAGAAGCCTGGATTTACCGGTCATCAGTA
TTTGCTAGAAGAAGGAGAATACAGGGACTGGAAAGCCTGGGGAGGTTACAATGG

AGAGCTTCAGTCTTTACGACCTATATTAGGTGATTTTTCAAATGCTCACATGATA
ATGTACAGTGAAAAAACTTTGGATCCAAAGGTTCCAGTATTGATGTATTGGGAA
TTGTTGCTAATTTAAAGGAGACTGGATATGGAGTGAAGACACAGTCTATTAATGT
ACTGAGTGGAGTATGGGTAGCCTATGAAAATCCTGACTTCACAGGAGAACAGTA
5 TATACTGGATAAAGGATTTTATACCAGTTTGTAGGACTGGGGAGGCCAAAAATTAT
AAGATCTCTTCTGTTCAACCTATATGTTTGGATTCTTTCCTGGCCCAAGGAGACG
AAATCAGATTCACTTGTTTTCAGAACCACAGTTTCAAGGTCACAGTCAAAGTTTT
GAAGAAACAACAAGTCAAATTGATGATTCATTTTCTACCAAGTCTTGCAGAGTTT
CAGGAGGCAGCTGGGTGTATATGATGGAGAAAATTTCACTGGTAATCAATACG
10 TGTGGAAGAAGGCCATTATCCTTGTCTGTCTGCAATGGGATGCCCGCCTGGAGC
AACTTTCAAGTCTCTTCGTTTTATAGATGTTGAATTTTCTGAACCAACAATTATTC
TCTTTGAAAGAGAAGACTTCAAAGGAAAAAAGATTGAACCTTAATGCAGAACTG
TCAATCTCCGATCCCTGGGATTCAACACACAAATACGCTCTGTTTCAGGTTATTGG
TGGCATATGGGTACTTATGAATATGGCAGTTACAGAGGGCGACAGTTCCCTATTG
15 TCACCTGCAGAAGTACCTAATTGGTATGAATTCAGTGGCTGTCGCCAAATAGGTT
CTCTACGACCTTTTGTTCAGAAGCGAATTTATTTTCAGACTTCGAAACAAAGCAAC
AGGGTTATTTCATGTCAACCAATGGAACTTAGAGGATCTGAAGCTTCTGAGGATA
CAGGTCATGGAGGATGTCGGGGCCGATGATCAGATTTGGATCTATCAAGAAGGA
TGTATCAAATGCAGGATAGCAGAAGACTGCTGCCTGACGATTGTGGGCAGCCTG
20 GTAACATCTGGCTCCAAGCTAGGCCTGGCCCTGGACCAGAAATGCTGACAGCCAG
TTCTGGAGCTTGAAGTCCGATGGCAGGATTTACAGCAAGTTGAAGCCAAATTTAG
TTTAGACATTAAAGGGGGCACACAGTATGATCAAAATCACATTATCCTCAACAC
TGTCAGCAAAGAGAAGTTTACACAAGTGTGGGAAGCCATGGTCCTATATACCTG
AACAAAGAAGGAAGAAGAATCTTCTGGAGGTCCTTCCAGCCACCTTATTTCTTAA
25 AAAGGACAATGCTGATGGAAGACCAGACTGGAAAGTGGATCGACTCCTCCTTCA
TTGATTCTAAATTCAACCTTAAATCATGCTGCCATGACTCAGAGAACTTACTCAT
CGTTTCAAAGACTATCATAGCTTTAAACCAATAATTTGTCCTCCTTTCATTTCTT
GCCTTTCATTTTGGTAGCTGCTTAAACAGGTTGCCTAATTAGCAGCTTTTGGGTG
ATTTTGTAATAATGTTATATCAAGATTTCAAGACTGTGTACATTTTAAATTATTTCC
30 AAAGATAGTGACAGGAGAGAACTGGAACAAATTTACCAACTTTGTGGACCTACA
AAGCCCTTACACTTTAAAGGGTAAGACAAAGGCTTAAGTTTGAAAGGTAGAGAA
CTGTTTAGCATCTGAGAAGAAATACTTTATTAGGCCTGTAATTTGGTTCTTGGCC
TTAAACACTTTCTGGAACCTTTAAATATGCTGCATAGCACAATGGGAAAGCCTTA
GGTATTACACATTTAAGGAACTCTAAACAAAATACTATTTTCCTTTAGTTCATAT
35 TAAAAATTAATACATTTTAAAAATTTAATGTCAAAGTCTGGTAACATTTGTTAGT
AGGATTTGAGTTATTATTTTTTGAGACAGGATCTCAGGCTGGAGTGCAGTGGCAC
AATCACGGCTCACTGCAGCCTCTACCTCCCCAGGCTCAGGTGATCCTCCACCTC
AGCCTCCCAAGTAGCTGGGACTATAGGCACACATCACCAGCCAGCCAAATTTT
GTTTTTTTTTTGTAGAGATGGGGTTTCATCACGTTGCCAGGCTGATCTCGAACCT
40 CTGGGCTCAAGCAATTCCTCGCCTCGGCCTCCCAAATGCTGGGATTACAGGCC
TGAGCCACTGCGCCAGCCAGGATTTGAATTATTTTAACTCATCCATGGGCTGCC
CTAGAATGTCACAAATGAGGGTTGTTTAAATGCCTTTCTTATAGCTGCTACTGGAA
CACTATTATGACCTAATTTATGAGCCATCCTTACTCATCTACAAGTGCTGAAGCA
ATGTTACATACTTTTTTGTAAACTCAGATTTTTTAGCCTAATTTCTTGTCTCCTA
45 TCCACCTGCATCCACACATGGCCTGCATGGGGCTGCCTTCCCTGCAGTGTCTGC
AGCCATGCTTCAGGGTATAGCTGTTGGTGGACAGCCTCAGGTCTTGGGGGCACTA
TAGCCACTAAACGAGGTGTGAAAGGCTCAAGAGGATGACCAGCAATTAATTATC
CCCAGAAAGTGAAGGAAAAGAGACCTTTAGGGATGTTGCTGGTCAAGTCTTGAT
TTGACCGGAGTCAAATCAATCTTCAAGCAATCTTGAATCCTCAACTGCAGTAAG

CATTTCAAAATGCAAACAAACTGCTTAACAACTGACAAGACACCAGCCCATATG
CTGCTCTTCCAACAGTGGGTTCTAGCTTTGAACAAAAGTGCTAAACATTTCTTG
AATATATTCTTCTCTTTTTGTCCTCATCACTCAATACTGGTGCTCTTGTCACAGG
TAGAACAGCTTGTTTCTTTTCCATCTATTCAAGTGTGTTTCTAATTCTAAAATGCT
5 GATCTTCTCTGGAGTCTATGGTAGGCAATTATGGTCACTGGAATAGTTTGTCTTG
TTTAAAATATTATTGGTGCATGTACAACAGCATCCAACATATCTGTCTTGTTCTTA
GATATATAGCTCTGATTTTAGGCCTTTTGTGCATACCATTACAATATGGTGGGGT
AAGACATTCTACAGTAGCCTGTGCTGAACTGATCTCTTAAATAAACTTGCTTCTG
GTTAACTAAAAAAAAAAAAAAAAAAAAA

10

SEQ ID NO: 167

>gi|1518787|gb|U62801.1|HSU62801 Human protease M mRNA, complete cds

AGGCGGACAAAGCCCGATTGTTCTGGGCCCTTTCCCATCGCGCCTGGGCCTGC
TCCCCAGCCCGGGGCAGGGGCGGGGCCAGTGTGGTGACACACGCTGTAGCTGT
15 CTCCCCGGCTGGCTGGCTCGCTCTCTCTGGGGACACAGAGGTCGGCAGGCAGCA
CACAGAGGGACCTACGGGCAGCTGTTCTTCCCCCGACTCAAGAATCCCCGGAG
GCCCCGAGGCCTGCAGCAGGAGCGGCCATGAAGAAGCTGATGGTGGTGCTGAGT
CTGATTGCTGCAGCCTGGGCAGAGGAGCAGAATAAGTTGGTGCATGGCGGACCC
TGCGACAAGACATCTCACCCCTACCAAGCTGCCCTCTACACCTCGGGCCACTTGC
20 TCTGTGGTGGGGTCCTTATCCATCCACTGTGGGTCCTCACAGCTGCCCACTGCAA
AAAACCGAATCTTCAGGTCTTCTGGGGAAGCATAACCTTCGGCAAAGGGAGAG
TTCCAGGAGCAGAGTTCTGTTGTCCGGGCTGTGATCCACCCTGACTATGATGCC
GCCAGCCATGACCAGGACATCATGCTGTTGCGCCTGGCACGCCCAGCCAACTCT
CTGAACCTCATCCAGCCCCTTCCCCTGGAGAGGGACTGCTCAGCCAAACACCACAG
25 CTGCCACATCCTGGGCTGGGGCAAGACAGCAGATGGTGATTTCCCTGACACCATC
CAGTGTGCATACATCCACCTGGTGTCCCGTGAGGAGTGTGAGCATGCCTACCCTG
GCCAGATCACCCAGAACATGTTGTGTGCTGGGGATGAGAAGTACGGGAAGGATT
CCTGCCAGGGTGATTCTGGGGGTCCGCTGGTATGTGGAGACCACCTCCGAGGCCT
TGTGTCATGGGGTAACATCCCCTGTGGATCAAAGGAGAAGCCAGGAGTCTACAC
30 CAACGTCTGCAGATACACGAACCTGGATCCAAAAAACCATTACAGGCCAAGTGACC
CTGACATGTGACATCTACCTCCCGACCTACCACCCCACTGGCTGGTTCCAGAACG
TCTCTACCTAGACCTTGCCTCCCCTCCTCTCCTGCCCAGCTCTGACCCTGATGCT
TAATAAACGCAGCGACGTGAGGGTCCTGATTCTCCCTGGTTTTACCCAGCTCCA
TCCTTGATCACTGGGGAGGACGTGATGAGTGAGGACTTGGGTCCTCGGTCTTAC
35 CCCCACCACTAAGAGAATACAGGAAAATCCCTTCTAGGCATCTCCTCTCCCCAAC
CCTTCCACACGTTTGATTTCTTCTGTCAGAGGCCAGCCACGTGTCTGGAATCCC
AGCTCCGCTGCTTACTGTCGGTGTCCCCTTGGGATGTACCTTTCTTCACTGCAGAT
TTCTCACCTGTAAGATGAAGATAAGGATGATACAGTCTCCATCAGGCAGTGGCTG
TTGGAAAGATTTAAGATTTACACCTATGACATACATGGGATAGCACCTGGGCCG
40 CCATGCACTCAATAAAGAATGTATTT

SEQ ID NO: 168

>gi|2570124|dbj|AB000712.1|AB000712 Homo sapiens hCPE-R mRNA for CPE-receptor, complete cds

GAAGGAACTGGTTCTGCTCACACTTGCTGGCTTGCGCATCAGGACTGGCTTTATC
TCCTGACTCACGGTGCAAAGGTGCACTCTGCGAACGTTAAGTCCGTCCCCAGCGC
TTGGAATCCTACGGCCCCCACAGCCGGATCCCCTCAGCCTTCCAGGTCCTCAACT
45 CCCGTGGACGCTGAACAATGGCCTCCATGGGGCTACAGGTAATGGGCATCGCGC
TGGCCGTCCTGGGCTGGCTGGCCGTCATGCTGTGCTGCGCGCTGCCCATGTGGCG

CGTGACGGCCTTCATCGGCAGCAACATTGTCACCTCGCAGACCATCTGGGAGGGC
CTATGGATGAACTGCGTGGTGCAGAGCACCGGCCAGATGCAGTGCAAGGTGTAC
GACTCGCTGCTGGCACTGCCGCAGGACCTGCAGGCGGCCCGCGCCCTCGTCATCA
TCAGCATCATCGTGGCTGCTCTGGGCGTGCTGCTGTCCGTGGTGGGGGGCAAGTG
5 TACCAACTGCCTGGAGGATGAAAGCGCCAAGGCCAAGACCATGATCGTGGCGGG
CGTGGTGTTCCTGTTGGCCGGCCTTATGGTGATAGTGCCGGTGTCTTGACGGCC
CACAAATCATCCAAGACTTCTACAATCCGCTGGTGGCCTCCGGGCAGAAAGCGG
GAGATGGGTGCCTCGCTCTACGTCGGCTGGGCCCGCCTCCGGCCTGCTGCTCCTTG
GCGGGGGGCTGCTTTGCTGCAACTGTCCACCCCGCACAGACAAGCCTTACTCCGC
10 CAAGTATTCTGCTGCCCCGCTCTGCTGCTGCCAGCAACTACGTGTAAGGTGCCACG
GCTCCACTCTGTTCTCTCTGCTTTGTTCTTCCCTGGACTGAGCTCAGCGCAGGCT
GTGACCCCAAGGAGGGCCCTGCCACGGGCCACTGGCTGCTGGGGACTGGGGACTG
GGCAGAGACTGAGCCAGGCAGGAAGGCAGCAGCCTTCAGCCTCTCTGGCCCACT
CGGACAACTTCCCAAGGCCGCTCCTGCTAGCAAGAACAGAGTCCACCCTCCTCT
15 GGATATTGGGGAGGGACGGAAGTGACAGGGTGTGGTGGTGGAGTGGGGAGCTG
GCTTCTGCTGGCCAGGATAGCTTAACCCTGACTTTGGGATCTGCCTGCATCGGCG
TTGGCCACTGTCCCCATTTACATTTTCCCCACTCTGTCTGCCTGCATCTCCTCTGTT
CCGGGTAGGCCTTGATATCACCTCTGGGACTGTGCCTTGCTCACCGAAACCCGCG
CCCAGGAGTATGGCTGAGGCCTTGCCACCCACCTGCCTGGGAAGTGCAGAGTG
20 GATGGACGGGTTTAGAGGGGAGGGGCGAAGGTGCTGTAAACAGGTTTGGGCAGT
GGTGGGGGAGGGGGCCAGAGAGGCGGCTCAGGTTGCCCAGCTCTGTGGCCTCAG
GACTCTCTGCCTCACCCGCTTCAGCCCAGGGCCCCCTGGAGACTGATCCCCTCTGA
GTCCTCTGCCCCCTTCCAAGGACACTAATGAGCCTGGGAGGGTGGCAGGGAGGAG
GGGACAGCTTCACCCTTGGAAGTCCTGGGGTTTTTCTCTTCTTCTTTGTGGTTT
25 CTGTTTTGTAAATTTAAGAAGAGCTATTCATCACTGTAATTATTATTATTTCTACA
ATAAATGGGACCTGTGCACAGG

SEQ ID NO: 169

>2027449H1

30 CTCTGCCACCTGGTCTGCCACAGATCCATGATGTGCAGTTCTCTGGAGCAGGCGC
TGGCTGTGCTGGTCACTACCTTCCACAAGTACTCCTGCCAAGAGGGCGACAAGTT
CAAGCTGAGTAAGGGGGAAATGAAGGAACTTCTGCACAAGGAGCTGCCAGCTT
TGTGGGGGAGAAAGTGGATGAGGAGGGGTGAAGAAGCTGATGGGCAGCCTGGA
TGAGAACACGGACAAGCAGGTGGACTTCCAGGAGTATGCTGTTTTCTGGGAAC
35 TCATCA

SEQ ID NO: 170

>gi|338633|gb|J05392.1|HUMSYN Human syndecan mRNA, complete cds

40 GGAGAGGTGCGGGCCGAATCCGAGCCGAGCGAGAGGAATCCGGCAGTAGAGAG
CGGACTCCAGCCGGCGGACCCTGCAGCCCTCGCCTGGGACAGCGGCGCGCTGGG
CAGGCGCCCAAGAGAGCATCGAGCAGCGGAACCCGCGAAGCCGGCCCGCAGCC
GCGACCCGCGCAGCCTGCCGCTCTCCCGCCGCGGTCCGGGCAGCATGAGGCGC
GCGGCGCTCTGGCTCTGGCTGTGCGCGCTGGCGCTGAGCCTGCAGCTGGCCCTGC
CGCAAATTGTGGCTACTAATTTGCCCCCTGAAGATCAAGATGGCTCTGGGGATGA
45 CTCTGACAACTTCTCCGGCTCAGGTGCAGGTGCTTTGCAAGATATCACCTTGTC
CAGCAGACCCCTCCACTTGGAAGGACACGCAGCTCCTGACGGCTATTCCCACGT
CTCCAGAACCCACCGGCCTGGAGGCTACAGCTGCCTCCACCTCCACCCTGCCGGC
TGGAGAGGGGGCCCAAGGAGGGAGAGGCTGTAGTCCTGCCAGAAGTGGAGCCTG
GCCTCACCGCCCGGGAGCAGGAGGCCACCCCCGACCCAGGGAGACCACACAGC

TCCCGACCACTCATCAGGCCTCAACGACCACAGCCACCACGGCCCAGGAGCCCCG
CCACCTCCCACCCCCACAGGGACATGCAGCCTGGCCACCATGAGACCTCAACCCC
TGCAGGACCCAGCCAAGCTGACCTTCACACTCCCCACACAGAGGATGGAGGTCC
TTCTGCCACCGAGAGGGGCTGCTGAGGATGGAGCCTCCAGTCAGCTCCCAGCAGC
5 AGAGGGCTCTGGGGAGCAGGACTTCACCTTTGAAACCTCGGGGGAGAATACGGC
TGTAAGTGGCCGTGGAGCCTGACCGCCGGAACCAAGTCCCCAGTGGATCAGGGGGC
CACGGGGGGCCTCACAGGGGCCTCCTGGACAGGAAAGAGGTGCTGGGAGGGGTCAT
TGCCGGAGGCCTCGTGGGGCTCATCTTTGCTGTGTGCCTGGTGGGTTTCATGCTGT
ACCGCATGAAGAAGAAGGACGAAGGCAGCTACTCCTTGGAGGAGCCGAAACAA
10 GCCAACGGCGGGGGCCTACCAGAAGCCCACCAAACAGGAGGAATTCTATGCCTGA
CGCGGGAGCCATGCGCCCCCTCCGCCCTGCCACTCACTAGGCCCCCACTTGCTC
TTCCTTGAAGAACTGCAGGGCCCTGGCCTCCCCTGCCACCAGGCCACCTCCCCAGC
ATTCCAGCCCCTCTGGTCGCTCCTGCCACGGAGTCGTGGGTGTGCTGGGAGCTC
CACTCTGCTTCTCTGACTTCTGCCTGGAGACTTAGGGCACCAGGGGTTTCTCGCAT
15 AGGACCTTTCCACCACAGCCAGCACCTGGCATCGCACCATTTCTGACTCGGTTTCT
CCAAACTGAAGCAGCCTCTCCCCAGGTCCAGCTCTGGAGGGGAGGGGGATCCGA
CTGCTTTGGACCTAAATGGCCTCATGTGGCTGGAAGATCTGCGGGTGGGGCTTGG
GGCTCACACACCTGTAGCACTTACTGGTAGGACCAAGCATCTTGGGGGGGTGGC
CGCTGAGTGGCAGGGACAGGAGTCACCTTTGTTTCGTGGGGAGGTCTAATCTAGAT
20 ATCGACTTGTTTTTGCACATGTTTCCTCTAGTTCTTTGTTTCATAGCCCAGTAGACC
TTGTTACTTCTGAGGTAAGTTAAGTAAGTTGATTTCGGTATCCCCCATCTTGCTTC
CCTAATCTATGGTCGGGAGACAGCATCAGGGTTAAGAAGACTTTTTTTTTTTTTT
TTAAACTAGGAGAACCAAATCTGGAAGCCAAAATGTAGGCTTAGTTTGTGTGTTG
TCTCTTGAGTTTGTGCTCATGTGTGCAACAGGGTATGGACTATCTGTCTGGTGGC
25 CCCGTTTCTGGTGGTCTGTTGGCAGGCTGGCCAGTCCAGGCTGCCGTGGGGCCGC
CGCCTCTTTCAAGCAGTCGTGCCTGTGTCCATGCGCTCAGGGCCATGCTGAGGCC
TGGGCCGCTGCCACGTTGGAGAAGCCCGTGTGAGAAGTGAATGCTGGGACTCAG
CCTTCAGACAGAGAGGACTGTAGGGAGGGCGGCAGGGGCCTGGAGATCCTCCTG
CAGACCACNCCCGTCCTGCCTGTGCGCCGTCTCCAGGGGCTGCTTCCTCCTGGAA
30 ATTGACGAGGGGTGTCTTGGGCAGAGCTGGCTCTGAGCGCCTCCATCCAAGGCC
AGGTTCTCCGTTAGCTCCTGTGGCCCCACCCTGGGCCCTGGGCTGGAATCAGGAA
TATTTTCCAAAGAGTGATAGTCTTTTGCTTTTGGCAAACCTCTACTTAATCCAATG
GGTTTTCCCTGTACAGTAGATTTTCCAAATGTAATAAACTTTAATATAAAGT

35 SEQ ID NO: 171

>gi|602452|gb|M25315.1|HUMCYTNEWA Homo sapiens (clone pAT 464) potential
lymphokine/cytokine mRNA, complete cds

GAATTCCCGGGCAGCAGACAGTGGTCAGTCCTTTCTTGGCTCTGCTGACACTCGA
GCCACATTCCGTCACCTGCTCAGAATCATGCAGGTCTCCACTGCTGCCCTTGCT
40 GTCCTCCTCTGCACCATGGCTCTCTGCAACCAGTTCTCTGCATCACTTGCTGCTGA
CACGCCGACCGCCTGCTGCTTCAGCTACACCTCCCGGCAGATTCCACAGAATTTCC
ATAGCTGACTACTTTGAGACGAGCAGCCAGTGCTCCAAGCCCGGTGTCATCTTCC
TAACCAAGCGAAGCCGGCAGGTCTGTGCTGACCCAGTGAGGAGTGGGTCCAGA
AATATGTCAGCGACCTGGAGCTGAGTGCCTGAGGGGTCCAGAAGCTTCGAGGCC
45 CAGCGACCTCGGTGGGGCCAGTGGGGAGGAGCAGGAGCCTGAGCCTTGGGAACA
TGCGTGTGACCTCCACAGCTACCTCTTCTATGGACTGGTTGTTGCCAAACAGCCA
CACTGTGGGACTCTTCTTAACTTAAATTTTAAATTTATTTATACTATTTAGTTTTTGT
AATTTATTTTCGATTTACAGTGTGTTTGTGATTGTTTGCTCTGAGAGTTCCCCTG
TCCCCTCCCCCTTCCCTCACACCGCGTCTGGTGACAACCGAGTGGCTGTCATCAG

CCTGTGTAGGCAGTCATGGCACCAAAGCCACCAGACTGACAAATGTGTATCGGA
TGCTTTTGTTCAGGGCTGTGATCGGCCTGGGGAAATAATAAAGATGCTCTTTTAA
AAGGT

5 SEQ ID NO: 172

>gi|179039|gb|M30704.1|HUMARXC Human amphiregulin (AR) mRNA, complete cds,
clones lambda-AR1 and lambda-AR2

AGACGTTCGCACACCTGGGTGCCAGCGCCCCAGAGGTCCCGGGACAGCCCGAGG
CGCCGCGCCCGCCGCCCCGAGCTCCCCAAGCCTTCGAGAGCGGCGCACACTCCC
10 GGTCTCCACTCGCTCTTCCAACACCCGCTCGTTTTTGCGGCAGCTCGTGTCCCAGA
GACCGAGTTGCCCCAGAGACCGAGACGCCGCCGCTGCGAAGGACCAATGAGAGC
CCCGCTGCTACCGCCGGCGCCGGTGGTGTCTGCTCTTGATACTCGGCTCAGGC
CATTATGCTGCTGGATTGGACCTCAATGACACCTACTCTGGGAAGCGTGAACCAT
TTTCTGGGGACACAGTGCTGATGGATTTGAGGTTACCTCAAGAAGTGAGATGTC
15 TTCAGGGAGTGAGATTTCCCTGTGAGTGAAATGCCTTCTAGTAGTGAACCGTCC
TCGGGAGCCGACTATGACTACTCAGAAGAGTATGATAACGAACCACAAATACCT
GGCTATATTGTCGATGATTCAGTCAGAGTTGAACAGGTAGTTAAGCCCCCCCCAAA
ACAAGACGGAAAGTGAAAATACTTCAGATAAACCCAAAAGAAAGAAAAAGGGA
GGCAAAAATGGAAAAAATAGAAGAAACAGAAAGAAGAAAAATCCATGTAATGC
20 AGAATTTCAAAATTTCTGCATTCACGGAGAATGCAAATATATAGAGCACCTGGA
AGCAGTAACATGCAAATGTCAGCAAGAATATTTCCGGTGAACGGTGTGGGGAAAA
GTCCATGAAAACCTCACAGCATGATTGACAGTAGTTTATCAAAAATTGCATTAGCA
GCCATAGCTGCCTTTATGTCTGCTGTGATCCTCACAGCTGTTGCTGTTATTACAGT
CCAGCTTAGAAGACAATACGTCAGGAAATATGAAGGAGAAGCTGAGGAACGAA
25 AGAAACTTCGACAAGAGAATGGAAATGTACATGCTATAGCATAACTGAAGATAA
AATTACAGGATATCACATTGGAGTCACTGCCAAGTCATAGCCATAAATGATGAGT
CGGTCCTCTTTCCAGTGGATCATAAGACAATGGACCCTTTTTGTTATGATGGTTTT
AACTTTCAATTGTCACCTTTTTATGCTATTTCTGTATATAAAGGTGCACGAAGGTA
AAAAGTATTTTTCAAGTTGTAAATAATTTATTTAATATTTAATGGAAGTGTATTT
30 ATTTTACAGCTCATTAACCTTTTTTAACC

SEQ ID NO: 173

>1227785H1

AAGATTTGCATTCACCTGGCCCAAACCCTTTTTGTCTCTTTGGGTGACCGGAAAA
35 CTCCACCTCAAGTTTTCTTTTGTGGGGCTGCCCCCAAGTGTCGTTTGTTTTACTG
TAGGGTCTCCCCGCCCCGGCGCCCCCAGTGTTTTCTGAGGGCGGAAATGGCCAATT
CGGGCCTGCAGTTGCTGGGCTTCTCCATGGCCCTGCTGGGCTGGGTGGGTCTGGT
GGCCTGCACCGCCATCCCGNAGTGGCAGATGAGCTCCTATGCGGGTGACA

40 SEQ ID NO: 174

>4872203H1

CTGCTGGCTCACCTCCGAGCCACCTCTGCTGCGCACCGCACCTCGGACCTACAGC
CCAGGATACTTTGGGACTTGCCGGCGCTCAGAAACGCGCCAGACGGCCCCCTCC
ACCTTTTGTGTGCTAGGGCGCCGAGAGCGCCCGGAGGGAACCGCCTGGCCTTCG
45 GGGACCACCAATTTTGTCTGGAACCACCTCCCGGCGTATCCTACTCCCTGTGCC
GCGAGCCATCGCTTCACTGGAGGG

SEQ ID NO: 175

>gi|1011705|gb|H58873.1|H58873 yr36a12.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:207358 3' similar to gb:K03195 GLUCOSE TRANSPORTER TYPE 1, ERYTHROCYTE/BRAIN (HUMAN);, mRNA sequence

5 ACTATAACTTAGTGTCTGTATTTAATATTGACAACCAAAAATATATATANTTTTNT
TGCATCTATACACAACAGGGCAGGAGTCTCCATGTNTTCTTGAGCAGTGAGTTTG
CAGGCTCCCACAGGCCCTCTTCTCATGGTAATAGTGTGGCCCTAGTGCAAAGGAG
ACTAGAACCCGGCAGCCCAGACTGGCCCTTCCCCTCTCCTCCCTGCACTCCAGTG
CTTCCCAACTGGTCTCAGGTAAAGAAAGNTTANTTTGAGTGGTTGGGTAGGAAG
10 AGATGGGAAGGGGCAAATCCTAATGGGAGCCTGACCCCTAGAGTGGGGAGTTCC
AGGGCCAGCAGAACGGGTGGGCCATAGCCCTNCCTGGGGNTAGAAGCTTTGTAG
TTCATAGTTCGATTAGTNTGTCCNTAGGGCATNAGGTNCCAGCCCTACAGATTAG
CT

15 SEQ ID NO: 176

>1858095F6

CATCCATTTCGATTCGCGCATTCTCCAGACCTTTACAGCCTGTGCTGGGTACTG
GAGACTCCCTGGGTGGGGGCCCTGAGGGCCCGTGCTTCTGCCCCACCCCTGCAA
CCTGACACGCTATGGGAAAGAGATCTCCATGGTCAGGATCCCCAACAGGGGGCTC
20 AGCCCGGTACCTGGCGAGGAAGTACAACCGCAACGAGACCTACATACGGGAGAA
CTTCCTGGTCCTAGATGTCTTTGAGGCCCTGACCTCTGAAGCCATGGAGCAG
CGAGCAGCCTATGGCCTGTCAGCCCTGCTGGGAGACCTCGGGGGACAGATGGGC
CTGTTCAATTGGGGCCAGCATCCTCACGTTGCTGGAGATCCTCGACTACATCTATG
AGGTGTCCTGGGATCGACTGAAGCGGGTATGGAGGCGTCCCAAGACCCCCCTG
25 GGGACCTCCACTGGGGGCATCTCCA

SEQ ID NO: 177

>gi|2046919|gb|AA393950.1|AA393950 zt78a10.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728442 5' similar to gb:L29007_cds1 AMILORIDE-SENSITIVE SODIUM CHANNEL ALPHA-SUBUNIT (HUMAN);, mRNA sequence

30 AGGAGAGCATGATCAAGGAGTGTGGCTGTCTACATCTTCTATCCGCGGGCCCCAGA
ACGTGGAGTACTGTGACTACAGAAAGCACAGTTCCTGGGGGTACTGCTACTATA
AGCTCCAGGTTGACTTCTCCTCAGACCACCTGGGCTGTTTCACCAAGTGCCGGAA
GCCATGCAGCGTGACCAGCTACCAGCTCTCTGCTGGTTACTCACGATGGCCCTCG
35 GTGACATCCCAGGAATGGGTCTTCCAGATGCTATCGCGACAGAACCAATTACACC
GTCAACAACAAGAGAAATGGAGTGGCCAAAGTCAACATCTTCTTCAAGGAGCTG
AACTACAAAACCAATTCTGAGTCTCCCTCTGTACGATGGTCAACCCTCCTGTCCA
ACCTGGGCAGCCAGTGGAGCCTGTGGTTCGGCTCCTCGGTGTTGTCTGTGGTGA
GATGGCTGAGCTCGTCTTTGACCTGCTGGTCATCATGTTCTCATGCTGCTCGAAG
40 TTCTNN

SEQ ID NO: 178

>gi|2184104|gb|AA459197.1|AA459197 zx88h05.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:810873 5', mRNA sequence

45 GTGCCAGCCCCGACTGGCCTGGCCACACTGCTCTCCAGTAGCACAGATGTCTGC
TCCTCCTCTTGAACCTTGGGTGGGAAACCCACCCAAAAGCCCCCTTTGTTACTTA
GGCAATTCCCCTTCCCTGACTCCCGAGGGCTAGGGCTAGAGCAGACCCGGGTAA
GTAAAGGCAGACCCAGGGCTCCTCTAGCCTCATACCCGTGCCCTCACAGAGCCAT
GCCCCGTCACCTCTGCCCTGTGTCTTTCATACCTCTACATGTCTGCTTGAGATATT

TCCTCAGCCTGAAAGTTTCCCCAACCATCTGCCAGAGAACTCCTATGCATCCCTT
AGAACCCTGCTCAGACACCATTACTTTTGTGAACGCTTCTGCCACATCTTGTCTTC
CCCAAATTGATCACT

5 SEQ ID NO: 179

>2701503T6

ACACTGAAGTCCACCCTGGGAGCTGGTAAAACAATTTCAAGTCTCAGACCCGTCTG
TTTTCCAGGGTCCCTCCGAGCCTGGGCTTCCTCAAGAGCGTGGCCCAAGGGCCCCA
CAGCCCAGATCCGGCAGCCCCACCACCTTCACTGAGGAGGCCCCGAAGCTCCGTT
10 CCCGCTGCTCCTTAGAGACAGGGGAGGCAGATATGCACAAACGCGCCTCGGCCC
AGCTTGGGGCTGGCGGGGGAGGCTGTGTCTTCAAACCTTTGCCCCCAGTTGGGTC
AGTAGAACCACCAGTGTCTCCCTTCTACCTCCCAGCTCCACTTTGGAGGCTGA
GGAAGCGAGAGGTTTTCTAGGCAGATTTGGAGCCCTGGAGATTGAGTTCACAGT
GTATGTTCTGGGGGCGCTGGTGCAGTCAGCGGTCCAGTCTCCAGCCTGCAGGCGT
15 GCACACTGGGGTGGACGATGGGTGGCCCCGCAGTGTACACATTTGGGTGGGCCC
CGGCCCTATACCCAGTGTTCTCTTTGATCCAGTCCCGAAACAGAAGGGAGCTT
GTGTACAC

SEQ ID NO: 180

20 >2798465H1

CAGATCTGGATGGAGTTGTGACCTTTGACTTGTTTAAGTGGTTGCAGCTGACCAT
GTTTGCATGAGGCAGGGACTCGGTCCCCCTTGCCGTGCTCCCCTCCCTCCTCGTCT
GCCAAGCCTCGCCTCCTACCACACCACACCAGGCCACCCAGCTGCAAGTGCCTT
CCTTGAGCAGAGAGGCAGCCTCGTCCTCCTGTCCCCTCTCCTCCCA

25

SEQ ID NO: 181

>gi|29370|emb|Y00106.1|HSBAR Human gene for beta-adrenergic receptor (beta-2 subtype)

GAATTCATGCCGCGTTTCTGTGTTGGACAGGGGTGACTTTGTGCCGGATGGCTTC
TGTGTGAGAGCGCGCGCAGTGTGCATGTCCGGTGAGCTGGGAGGGTGTGTCTCA
30 GTGTCTATGGCTGTGGTTCGGTATAAGTCTAAGCATGTCTGCCAGGGTGTATTTG
TGCCTGTATGTGCGTGCCTCGGTGGGCACTCTCGTTTCCTTCCGAATGTGGGGCA
GTGCCGGTGTGCTGCCCTCTGCCTTGAGACCTCAAGCCGCGCAGGCGCCCAGGGC
AGGCAGGTAGCGGCCACAGAAGAGCCAAAAGCTCCCGGGTTGGCTGGTAAGCAC
ACCACCTCCAGCTTTAGCCCTCTGGGGCCAGCCAGGGTAGCCGGGAAGCAGTGG
35 TGGCCCGCCCTCCAGGGAGCAGTTGGGCCCCGCCCCGGGCCAGCCTCAGGAGAAG
GAGGGCGAGGGGAGGGGAGGGAAAGGGGAGGAGTGCCTCGCCCCTTCGCGGCT
GCCGGCGTGCCATTGGCCGAAAGTTCCCGTACGTCACGGCGAGGGCAGTTCCTT
AAAGTCCTGTGCACATAACGGGCAGAACGCACCTGCGAAGCGGCTTCTTCAGAGC
ACGGGCTGGAAGTGGCAGGCACCGCGAGCCCCTAGCACCCGACAAGCTGAGTGT
40 GCAGGACGAGTCCCCACCACACCCACACCCACAGCCGCTGAATGAGGCTTCCAGG
CGTCCGCTCGCGGCCCCGCAGAGCCCCGCCGTGGGTCCGCCTGCTGAGGCGCCCCC
AGCCAGTGCCTTACCTGCCAGACTGCGCGCCATGGGGCAACCCGGGAACGGCA
GCGCCTTCTTGCTGGCACCCAATAGAAGCCATGCGCCGGACCACGACGTCACGC
AGCAAAGGGACGAGGTGTGGGTGGTGGGCATGGGCATCGTCATGTCTCTCATCG
45 TCCTGGCCATCGTGTGTTGGCAATGTGCTGGTCATCACAGCCATTGCCAAGTTCGA
GCGTCTGCAGACGGTCACCAACTACTTCATCACTTCACTGGCCTGTGCTGATCTG
GTCATGGGCCTGGCAGTGGTGCCCTTTGGGGCCGCCCATATTCTTATGAAAATGT
GGAATTTTGGCAACTTCTGGTGCGAGTTTTGGACTTCCATTGATGTGCTGTGCGTC
ACGGCCAGCATTGAGACCCTGTGCGTGATCGCAGTGGATCGCTACTTTGCCATTA

CTTCACCTTTCAAGTACCAGAGCCTGCTGACCAAGAATAAGGCCCGGGTGATCAT
TCTGATGGTGTGGATTGTGTCAGGCCTTACCTCCTTCTTGCCCATTCAGATGCACT
GGTACCGGGGCCACCCACCAGGAAGCCATCAACTGCTATGCCAATGAGACCTGCT
GTGACTTCTTCACGAACCAAGCCTATGCCATTGCCTCTTCCATCGTGTCTTCTAC
5 GTTCCCCTGGTGATCATGGTCTTCGTCTACTCCAGGGTCTTTCAGGAGGCCAAAA
GGCAGCTCCAGAAGATTGACAAATCTGAGGGCCGCTTCCATGTCCAGAACCTTA
GCCAGGTGGAGCAGGATGGGCGGACGGGGCATGGACTCCGCAGATCTTCCAAGT
TCTGCTTGAAGGAGCACAAAGCCCTCAAGACGTTAGGCATCATCATGGGCACTTT
CACCTCTGCTGGCTGCCCTTCTTCATCGTTAACATTGTGCATGTGATCCAGGATA
10 ACCTCATCCGTAAGGAAGTTTACATCCTCCTAAATTGGATAGGCTATGTCAATTC
TGGTTTCAATCCCCTTATCTACTGCCGGAGCCCAGATTTTCAGGATTGCCTTCCAGG
AGCTTCTGTGCCTGCGCAGGTCTTCTTTGAAGGCCTATGGGAATGGCTACTCCAG
CAACGGCAACACAGGGGAGCAGAGTGGATATCACGTGGAACAGGAGAAAGAAA
ATAAACTGCTGTGTGAAGACCTCCCAGGCACGGAAGACTTTGTGGGCCATCAAG
15 GTACTGTGCCTAGCGATAACATTGATTACAAGGGAGGAATTGTAGTACAAATG
ACTCACTGCTGTAAAGCAGTTTTTCTACTTTTAAAGACCCCCCCCCCAACAGAA
CACTAAACAGACTATTTAACTTGAGGGTAATAAACTTAGAATAAAATTGTAAAT
TGTATAGAGATATGCAGAAGGAAGGGCATCCTTCTGCCTTTTTTATTTTTTTAAGC
TGTA AAAAGAGAGAAA ACTTATTTGAGTGATTATTTGTTATTTGTACAGTTCAGT
20 TCCTCTTTGCATGGAATTTGTAAGTTTATGTCTAAAGAGCTTTAGTCCTAGAGGAC
CTGAGTC

SEQ ID NO: 182

>gi|2110744|gb|AA429219.1|AA429219 zv78h08.r1 Soares_total_fetus_Nb2HF8_9w Homo
25 sapiens cDNA clone IMAGE:759807 5' similar to TR:G1136412 G1136412 KIAA0176
PROTEIN ;, mRNA sequence
GTGATCTGCATGTGGCAGGGCTGCGCAGTGGAGCGGCCAGTGGGCAGGATGACG
AGCCAGACCCCTCTGCCCCAGTCCCCCGGCCAGGCGGCCAACGATGTCTACTG
TTGTGGAGCTGAACGTCGGGGGTGAGTTCCACACCACCACCTGGGTACCCTGAG
30 GAAGTTTCCGGGCTCAAAGCTGGCAGAGATGTTCTCTAGCTTAGCCAAGGCCTCC
ACGGACGCGGAGGGGCCGCTTCTTCATCGACCGCCCCAGCACCTATTTTCAGACCCA
TCCTGGACTACCTGCGCACTGGGCAAGTGCCACACAGCACATCCCTGAAGTGTAC
CGTGAGGCTCAGTTCTACGAAATCAAGCCTTTGGTCAAGCTGCTGGAGGACATGC
CACAGATCTTTGGTGAGCAGGTGTCTCGGAAGCAGT

35

SEQ ID NO: 183

>903559H1

CAACTTCACAGAAGCTCTCGCTGAGACAGCCTGTAGGCAGATGGGCTACAGCAG
CAAACCCACTTTCAGAGCTGTGGAGATTGGCCCAGACCAGGATCTGGATGTTGTT
40 GAAATCACAGAAAACAGCCAGGAGCTTCGCATGCGGA ACTCAAGTGGGCCCTGT
CTCTCAGGCTCCCTGGTCTCCCTGCACTGTCTTGCTGTGGGAAGAGCCTGAAGA
CCCCGGGTGTGGTGGGTGGGGAGGAG

SEQ ID NO: 184

>gi|189952|gb|M86400.1|HUMPHPLA2 Human phospholipase A2 mRNA, complete cds
45 GCCCACTCCCACCGCCAGCTGGAACCCTGGGGACTACGACGTCCCTCAAACCTTG
CTTCTAGGAGATAAAAAGAACATCCAGTCATGGATAAAAATGAGCTGGTTCAGA
AGGCCAAACTGGCCGAGCAGGCTGAGCGATATGATGACATGGCAGCCTGCATGA
AGTCTGTA ACTGAGCAAGGAGCTGAATTATCCAATGAGGAGAGGAATCTTCTCTC

AGTTGCTTATAAAAATGTTGTAGGAGCCCGTAGGTCATCTTGGAGGGTCGTCTCA
AGTATTGAACAAAAGACGGAAGGTGCTGAGAAAAAACAGCAGATGGCTCGAGA
ATACAGAGAGAAAATTGAGACGGAGCTAAGAGATATCTGCAATGATGTACTGTC
TCTTTTGGAAAAGTTCTTGATCCCCAATGCTTCACAAGCAGAGAGCAAAGTCTTC
5 TATTTGAAAATGAAAGGAGATTACTACCGTTACTTGGCTGAGGTTGCCGCTGGTG
ATGACAAGAAAGGGATTGTCGATCAGTCACAACAAGCATAACCAAGAAGCTTTTG
AAATCAGCAAAAAGGAAATGCAACCAACACATCCTATCAGACTGGGTCTGGCCC
TTAACTTCTCTGTGTTCTATTATGAGATTCTGAACTCCCCAGAGAAAGCCTGCTCT
CTTGCAAAGACAGCTTTTGATGAAGCCATTGCTGAACTTGATACATTAAGTGAAG
10 AGTCATACAAAGACAGCACGCTAATAATGCAATTACTGAGAGACAACCTTGACAT
TGTGGACATCGGATACCCAAGGAGACGAAGCTGAAGCAGGAGAAGGAGGGGAA
AATTAACCGGCCTTCCAACCTTTTGTCTGCCTCATTCTAAAATTTACACAGTAGACC
ATTTGTCATCCATGCTGTCCCAAAATAGTTTTTTGTTTACGATTTATGACAGGTT
TATGTTACTTCTATTTGAATTTCTATATTTCCCATGTGGTTTTTATGTTTAATATTA
15 GGGGAGTAGAGCCAGTTAACATTTAGGGAGTTATCTGTTTTTCATCTTGAGGTGGC
CAATATGGGGATGTGGAATTTTATACAAGTTATAAGTGTTTGGCATAGTACTTT
TGGTACATTGTGGCTTCAAAGGGGCCAGTGTAAGTCTGCTTCCATGTCTAAGCAA
AGAAAAGTGCCTACATACTGGTTTGTCTGGCGGGGAATAAAAGGGATCATTGG
TTCCAGTCACAGGTGTAGTAATTGTGGGTACTTTAAGGTTTGGAGCACTTACAAG
20 GCTGTGGTAGAATCATACCCCATGGATACCACATATTAACCATGTATATCTGTG
GAATACTCAATGTGTACACCTTTGACTACAGCTGCAGAAGTGTTCCCTTTAGACAA
AGTTGTGACCCATTTTACTCTGGATAAGGGCAGAAACGGTTCACATTCCATTATT
TGTAAGTTACCTGCTGTTAGCTTTTATTATTTTGTCTACACTCATTATTTTGTAT
TTAAATGTTTTAGGCAACCTAAGAACAAATGTAAAAGTAAAGATGCAGGAAAAA
25 TGAATTGCTTGGTATTCATTACTTTCATGTATATCAAGCACAGCAGTAAAACAAAA
ACCCATGTATTTAACTTTTTTTTAGGATTTTTTGCTTTTGTGATTTTTTTTTTTTT
TTGATACTTGCCTAACATGCATGTGCTGTAAAAATAGTTAACAGGGAAATAACTT
GAGATGATGGCTAGCTTTGTTTAAATGTCTTATGAAATTTTCATGAACAATCCAAG
CATAATTGTTAAGAACACGTGTATTAATTCATGTAAAGTGGAATAAAAGTTTTAT
30 GAATGGACTTTTCAACTACTTTCTCTACAGCTTTTCATGTAAATTAGTCTTGGTTC
TGAAACTTCTCTAAAGGAAATTGTACATTCTTTGAAATTTATTCCTTATTCCTCT
TGGCAGCTAATGGGCTCTTACCAAGTTTAAACACAAAATTTATCATAACAAAAAT
ACTACTAATAATACTACTGTTTCCATGTCCCATGATCCCCCTCTCTTCCCTCCCCACC
CTGAAAAAAATGAGTTCCTATTTTTTCTGGGAGAGGGGGGGATTGATTAGAAAA
35 AAATGTAGTGTGTTCCATTTAAATTTTGGCATATGGCATTTCCTAACTTAGGAA
GCCACAATGTTCTTGGCCCATCATGACATTGGGTAGCATTAACTGTAAGTTTTGT
GCTTCCAAATCACTTTTTGGTTTTTAAGAATTTCTTGATACTCTTATAGCCTGCCTT
CAATTTTGATCCTTTATTCTTTCTATTTGTCAGGTGCACAAGATTACCTTCCTGTTT
TAGCCTTCTGTCTTGTACCAACCATTCTTACTTGGTGGCCATGTACTTGGA AAAA
40 GGCCGCATGATCTTTCTGGCTCCACTCAGTGTCTAAGGCACCCTGCTTCCTTTGCT
TGCATCCCACAGACTATTTCCCTCATCCTATTTACTGCAGCAAATCTCTCCTTAGT
TGATGAGACTGTGTTTATCTCCCTTTAAACCCTACCTATCCTGAATGGTCTGTCA
TTGTCTGCCTTTAAATCCTTCCTCTTTCTTCCCTCCTCTATTCTCTAAATAATGATG
GGGCTAAGTTATACCCAAAGCTCACTTTACAAAATATTTCCCTCAGTACTTTGCAG
45 AAAACACCAAACAAAAATGCCATTTTAAAAAAGGTGTATTTTTTCTTTTAGAATG
TAAGCTCCTCAAGAGCAGGGACAATGTTTTCTGTATGTTCTATTGTGCCTAGTAC
ACTGTAAATGCTCAATAAATATTGATGATGGGAGGCAGTGAGTCTTGATGATAA
GGGTGAGAACTGAAATCCC

SEQ ID NO: 185

>2301338H1

GTGACCTTTGACTTGTTTAAAGTGGTTGCAGCTGACCATGTTTGCATGAGGCAGGG
ACTCGGTCCCCCTTGCCGTGCTCCCCTCCCTCCTCGTCTG

5

SEQ ID NO: 186

>gi|1209100|gb|U41163.1|HSU41163 Human creatine transporter (SLC6A10) gene, partial
cds

10 CATGCGTGACTGCCCCCACAACACTCACACAGCTCTCACTCCCCACATGCTCCATGCC
TCCTGTCCCCACTGAGGAGAGCTCCTAGAGGGCTCGCCCCGCTCCCCACTGACATGC
ATCCCTGCAGACAAACGAGGCGCCAGAGAGCTTCCCCACTGCACTTGCCAGGG
CTGCGGGGCCAGCCTTGCCCCCTAGCTTCCCTTGGCGGGAGCTATGGCTCGGAGGA
GAATGGGGACTTCTGAACATACCTGCCCCGCAAGGGGGGACCGGAGGTGCTCGGAG
TGGGCTTGTGAGGGAGGTGGTGCCGCAGTCCCCGCTGAGCAGCCTGGCCCCCA
15 GATCGTGTACTTCACTGCTACATTCCCCTACGTGGTTCGTGGTTCGTGCTGCTTGTGC
TTGGAGTGCTGCTGCCTGGCGCCCTGGACAGCATCATTTACTATCTCAAGCCTGA
CTGGTCAAAGCTGGGGTCCCCTCAGGTGAGGTGGAGGTGGGGAGGCTGCAGCAG
GGTGTGTGGGGGAGCCCTGCAGGCCCTCATGCCTGCACTCTCCAGCCCTTTCT
CTGTAGGTATGGATAGATGTGGGGACCCAGATTTTCTTTTCTTATGCCATTGGCCT
20 GGGGGCCCTCACAGCCCTGGGCAGCTACAACCGCTTCAACAACAACCTGCTACAA
GTAAGCACTGCTGCCCTGCCACCCGTGCCCTGTCCCGCCCTGCCCTGCCCAGCAG
CCTAACCCATCCACTCTGGCCCCCTCCACCCCTCCAGGACGCCATCATCCTGGCTG
TCATCAACAGTGGGACCAGCTTCTTTGCTGGCTTCGTGGTCTTCTCCATCCTGGGC
TTCATGGCTGCAGAGCAGGGCATGCACATCTCCAAGGTGGCAGAGTCAGGTAGG
25 GCCCTACCCCCAGCCCCGCCTCCAGAGCAGCAACTGCCACCCAGATGCATGATGT
ACAAGAACACGCAATAGAAATGCTGAAAAGTGATGAGGATTCAAACAGAACTTC
TCAGATTGTGGGCCTGTGGGGGCAGGTCCTGGGATTTTTCAATGTTGACAGAGAC
AGGACCTCCCAGCCCCCTGCTGCATGACCCAGGGTTGACAGCACCTCAGAGGCAG
GCGTGGGCATGGGCGTGAGTGTTCAGGCAGGGCTCAGGGTGCGCGCAGGGCAC
30 GACATCGGCTGCAAGGTCTAGAGCCTGCACCTTTCCACAGGGCCGGGCTGGCC
TTCATCGCCTACCCACAGGCTGTCACTGATGCCAGTGGCCCCACTCTGGGCTG
CCCTGTTCTTCTTCATGCTGTTGCTGCTTGGTCTCGACAACCAGTTTGCATGGGCT
CTGGGACAGGGAGCCAGGAGAGGGGCGGAGTGAGGGCTGCGGGCAAGGAAAGG
GGTGGAGGGTGGTGCGGGGCTCGGCCTGAGCTAGCCTGGCCACAGTTTGTAGGT
35 GTGGAGGGCTTCATCACCGGCCTCCTCAACCTCCTCCCGGCCTCCTACTACTTCTG
TTTCCAAAGGGAGATCTCTGTGGCCCTCTGTTGTGCCCTCCGCTTTGTCAATTGATC
TCTCCATGGTGACTGATGTGAGTGGGGTGGGGGGTCTGCCTGTGACCTCTGGTGG
CCGTCTGCCATCCTCCCTGACTGGGCTCTGTCCCCAGGGTGGGATGTATGTCTTC
CAGCTGTTTGACTACTACTCGGCCAGCGGCACCACCCTGCTCTGGCAGGCCTTTT
40 GGGAGTGCGTGGTGGTGGTCTGGGTGTATGGTAGGTCATGGCTGAGGGCTGGGC
TGGGGCATGGTGACGGGGAAGGCAGGTCTCCAGCTTGGCCCTCCCGCCTCGCCTT
GCCACAGGAGCTGACCGCTTCACGGACGACATTGCCTGTATGATCGGGTACCGA
CCTTGCCCCCTGGATGAAATGGTGCTGGTCCCTTCTTCACCCCGCTGGTTTGCATGGT
AAGGGCTGGGGGAGGTGGGGCGGGGTGGGGGGGGCGGGGCGGGGTGGGGGCC
45 CATTAAGGACGGGCATTCTGGTCTGTAGGGCATCTTCATCTTCAACGTTGTGTAC
TACAAGCCGCTGGTCTACAACAACACCTACGTGTACCCGTGGTGGGGTGAGGCC
ATGGGCTGGGCCTTCGTGCTGTCTCCATGCTGTGCATGCCACTGCACCTCCTGG
GCTGCCTCCTCAGGGCCAAGGGCACCATGGCTGAGGTAAGGCTCCCTCCCGGCCT
GCCCTCCCCTCCCCTGCTATGAACATTCAACCCAGCCTGCTTCTAGCCAAGGAG

TGGCCCTGACTAGGGTGGCAGGCAGCAGGAGCTGGAGAGAGAGGCAGAGGAAG
 TCACCGTGGGGATGAGCAGGTGACTCTGGGGGCTTCAACATGTCCTCTCCTGCAG
 TGCTGGAAGCACCTGACCCAGCCCATCTGGGGCCTCCACCACTTGGAGTACCGAG
 CTCAGGATGCAGATGTCAGGGGCCTGACCACCCTGACCCCAGTGTCCGAGAGCA
 5 GCAAGGTCGTCGTGGTGGAGAGTGTGATGGGACAGCTCAGCTCACATCACCAGC
 TCACCTCTGGTAGCCATAGCAGCCCCTGCTTCATCCCCACCCCACCCCTCCAGGG
 GGCCTGCCTTTCCCTGACACTTTTGGGGTCTGCCTGGGAGAGGAGGGGAGAAAG
 CACCATGAGTGCTCACTAAAACAACCTTTTCCATTTTAAATAAAACGCCAAAAAT
 ATCACAACCCACCAAAAAATAGATGCCTCTCCCCCTCCAGTCCTAGCCCAGCTGGT
 10 CCTAGGCCCCCGCCTAGTGCCCCACCCCCACCCACAGTGCTGCACTCCTCCTGCCC
 CTGCCACGCCACCCCCTGCCACCTCTCCAGGTTCTGCTCTGTAGCACACCCTTG
 GGTGACCCCTCACCCCAGAAGCAGCAGTGGCAGCTTGGGAAATGTGAGGAAGGG
 AAGGAGGGAGAGACGGGAGGGAGGAGAGAGAGAGGAGAAGGGAGGCAGGGGAGG
 GGCAGCAGAACCAAGACAAATATTTAGCTGGGCTATACCCCTCTCCCCATCCCT
 15 GTTATAGAAGCTTAGAGAGCCAGCCAGCAGTGGAACCTTCTGGTTCCTGCGCCAA
 TCACCACCAATATCAATTGTGTGAGCTTGGGTGCGAGTGCACGCGTGCGTGAGCA
 CGTAGAGTATATATAGATCTCTATCTCTTAGCAAAGGTGAATACCAGATGTAAAT
 GGTGCCTCTGGGCAAAGGAGGCTTGTATTTTGCACATTTTATAACAACCTTGAGAG
 AATGAGATTTCTGCTTGTATATTTCTAAAAAGAGGAAGGAGCCCCAAACCCATCC
 20 TCTCCTTTACCACTCCCCATTTCTGTGAGCCCTACCTTACCCCTCTGCCCCTAGC
 CTAGGAGTGTGAATTTATAGATCTAACTTTCAGAGGCAAAACAAAAGCTTCGAG
 CTGTTGATGTGCAGTCTGTTGTGTGGATGTGTGTGTGTGGTCCCCCAGACCCAGA
 ATGGATTGGAAGGTGCATGGTGGGGCCTCGGGGCTGTCCCCACGCTGTCCCTTT
 GCCCACAGGTCTGTGGGGCAACAGGCTGCAATATTCCATCCTGGGTGTCTGGGCT
 25 GCTAACCTGGCCTGCTCAGGCTTCCCACCCTGTGCCCTGGGCTGGGCACACCCCC
 GGAAGGGACCCCGGACACGGCTCCACATCCAGGCTCAAGGCGGATGCACTTC
 CTGCACCTCCAGTCTTCTGTGTAGCGGCTTTAACCCACGTATGTCTGTACGTCCA
 GTCCCGAGACGGCTGAGTGACCCCAAGAAAGGCTTCCCTGACACCCGGACAGAG
 GCTGGAGGGCTGGGGCTGGGTGAGGGTGGTGGGCCTGCGGGGACATTCTACTGT
 30 GCTA

SEQ ID NO: 187

>gi|681577|gb|T70429.1|T70429 yd13g08.r1 Soares fetal liver spleen 1NFLS Homo sapiens
cDNA clone IMAGE:67070 5', mRNA sequence

35 CCAAACCATGTCAGACATGATATGATCAGATTTGTGTTTTGAAAAATTAACACTG
 CAATGTGGAGAATTGATTGGAGGGAATCAGAAGAGTCCAGTAAGTAGGAAAAA
 GTAATAACTTACACTAGGGTGGTAGCAGTAAGAATGGAAAGAAGTAGATGCATT
 TGAATGATACTCAAAAGGTGAAAATAACTGTTCTTAGTGATGAGATAGATGTAG
 GGATAAGCTGAAGCACTTAATGTAAAGGGACGGATGGTGTGTTCTTTCATTAAGA
 40 TAGGGAAGAGTAGGAGATTAGATTTCCAGAGGGAAGATCATGAGGTTGNATTTA
 AGGACGTCTTTGAGTTTTAAATGCCTCTGCCCTTCTTAAGTGGGAGATGTCCAAG
 TTAAGNCATTTGGGAT

SEQ ID NO: 188

45 >gi|1177439|emb|Z67743.1|HSCLC7MR H.sapiens mRNA for CLC-7 chloride channel
protein

GACGAGGAGGCGGCGCCGCTGCTGCGGAGGACGGCGCGGCCCGGCGGGGGGAC
 GCCGCTGCTGAACGGGGGCTGGGGCCGGGGCTGCGCGCCAGTCACCACGTTCTGC
 GCTTTTCCGAGTCGGACATATGAGCAGCGTGGAGCTGGATGATGAACTTTTGAC

CCGGATATGGACCCTCCACATCCCTTCCCCAAGGAGATCCCACACAACGAGAAG
CTCCTGTCCCTCAAGTATGAGAGCTTGGACTATGACAACAGTGAGAACCAGCTGT
TCCTGGAGGAGGAGCGGGCGGATCAATCACACGGCCTTCCGGACGGTGGAGATCA
AGCGCTGGGTTCATCTGCGCCCTCATTGGGATCCTCACGGGCCTCGTGGCCTGCTT
5 CATTGACATCGTGGTGGAAAACCTGGCTGGCCTCAAGTACAGGGTCATCAAGGG
CAATATCGACAAGTTCACAGAGAAGGGCGGACTGTCCTTCTCCCTGTTGCTGTGG
GCCACGCTGAACGCCCGCCTTCGTGCTCGTGGGCTCTGTGATTGTGGCTTTCATAG
AGCCGGTGGCTGCTGGCAGCGGAATCCCCAGATCAAGTGCTTCCTCAACGGGG
TGAAGATCCCCACGTGGTGGGCTCAAGACGTTGGTGATCAAAGTGTCCGGTGT
10 GATCCTGTCCGTGGTCCGGGGCCTGGCCGTGGGAAAGGAAGGGCCGATGATCCA
CTCAGGTTCAAGTATTGCCGCCGGGATCTCTCAGGGAAGGTCAAGCTCACTGAAA
CGAGATTTCAAGATCTTCGAGTACCTCCGCAGAGACACAGAGAAGCGGGACTTC
GTCTCCGCAGGGGCTGCGGCCGGAGTGTACGCGGCGTTTGGAGCCCCCGTGGGT
GGGGTCCTGTTTCAGCTTGGAGGAGGGTGCGTCCTTCTGGAACCAAGTTCCTGACCT
15 GGAGGATCTTCTTTGCTTCCATGATCTCCACGTTACCCCTGAATTTTGTCTGAGC
ATTTACCACGGGAACATGTGGGACCTGTCCAGCCCAGGCCTCATCAACTTCGGAA
GGTTTGACTCGGAGAAAATGGCCTACACGATCCACGAGATCCCGGTCTTCATCGC
CATGGGCGTGGTGGGCGGTGTGCTTGGAGCAGTGTCAATGCCTTGAACACTGAGG
CTGACCATGTTTCGAATCAGGTACATCCACCGGCCCTGCCTGCAGGTGATTGAGG
20 CCGTGCTGGTGGCCGCCGTACGGCCACAGTTGCCTTCGTGCTGATCTACTCGTC
GCGGGATTGCCAGCCCCTGCAGGGGGGCTCCATGTCCTACCCGCTGCAGCTCTTT
TGTGCAGATGGCGAGTAACTCCATGGCTGCGGCCTTCTTCAACACCCCGGAGA
AGAGCGTGGTGAGCCTCTTCCACGACCCGCCAGGCTCCTACAACCCCTGACCCT
CGGCCTGTTACGCTGGTCTACTTCTTCCCTGGCCTGCTGGACCTACGGGCTCACG
25 GTGTCTGCCGGGGTCTTCATCCCGTCCCTGCTCATCGGGGCTGCCTGGGGCCGGC
TCTTTGGGATCTCCCTGTCCTACCTACGGGGGCGGCGATCTGGGCGGACCCCGG
CAAATACGCCCTGATGGGAGCTGCTGCCAGCTGGGCGGGATTGTGCGGATGAC
ACTGAGCCTGACCGTCATCATGATGGAGGCCACCAGCAACGTGACCTACGGCTTC
CCCATCATGCTGGTGGTTCATGACCGCCAAGATCGTGGGCGACGTCTTCATTGAGG
30 GCCTGTACGACATGCACATTCAGCTGCAGAGTGTGCCCTTCCTGCACTGGGAGGC
CCCGGTCACCTCACACTCACTCACTGCCAGGGAGGTGATGAGCACACCAGTGAC
CTGCCTGAGGCGGCGTGAGAAGGTGCGGCGTCATTGTGGACGTGCTGAGCGACAC
GGCGTCCAATCACACGGCTTCCCCGTGGTGGAGCATGCCGATGACACCCAGCCT
GCCCCGCTCCAGGGCCTGATCCTGCGCTCCCAGCTCATCGTTCTCCTAAAGCACA
35 AGGTGTTTGTGGAGCGGTCCAACCTGGGCCTGGTACAGCGGCGCCTGAGGCTGA
AGGACTTCCGAGACGCCTACCCGCGCTTCCCACCCATCCAGTCCATCCACGTGTC
CCAGGACGAGCGGGAGTGCACCATGGACCTCTCCGAGTTCATGAACCCCTCCCCC
TACACGGTGCCCCAGGAGGCGTCCCTCCCACGGGTGTTCAAGCTGTTCCGGGGCCC
TGGGCCTGCGGCACCTGGTGGTGGTGGACAACCGCAATCAGGTTGTCGGGTTGGT
40 GACCAGGAAGGACCTCGCCAGGTACCGCCTGGGAAAGAGAGGCTTGGAGGAGCT
CTCGCTGGCCCAGACGTGAGGCCAGCCCTGCCCATAATGGG

SEQ ID NO: 189

>gi|190135|gb|M33882.1|HUMPMX1A Human p78 protein mRNA, complete cds

45 AGAGCGGAGGCCGCACTCCAGCACTGCGCAGGGACCGCCTTGGACCGCAGTTGC
CGGCCAGGAATCCAGTGTACGGTGGACACGCCTCCCTCGCGCCCTTGCCGCCC
ACCTGCTCACCCAGCTCAGGGGCTTTGGAATTCTGTGGCCACACTGCGAGGAGAT
CGGTTCTGGGTGCGAGGCTACAGGAAGACTCCCACTCCCTGAAATCTGGAGTGA
AGAACGCCGCCATCCAGCCACCATTCCAAGGAGGTGCAGGAGAACAGCTCTGTG

ATACCATTAACTTGTTGACATTACTTTTATTTGAAGGAACGTATATTAGAGCTTA
CTTTGCAAAGAAGGAAGATGGTTGTTTCCGAAGTGGACATCGCAAAAGCTGATC
CAGCTGCTGCATCCCACCCTCTATTACTGAATGGAGATGCTACTGTGGCCCAGAA
AAATCCAGGCTCGGTGGCTGAGAACAACCTGTGCAGCCAGTATGAGGAGAAGGT
5 GCGCCCCTGCATCGACCTCATTGACTCCCTGCGGGCTCTAGGTGTGGAGCAGGAC
CTGGCCCTGCCAGCCATCGCCGTCATCGGGGACCAGAGCTCGGGCAAGAGCTCC
GTGTTGGAGGCACTGTCAGGAGTTGCCCTTCCCAGAGGCAGCGGGATCGTGACC
AGATGCCCGCTGGTGCTGAAACTGAAGAACTTGTGAACGAAGATAAGTGGAGA
GGCAAGGTCAGTTACCAGGACTACGAGATTGAGATTTCCGGATGCTTCAGAGGTA
10 GAAAAGGAAATTAATAAAGCCCAGAATGCCATCGCCGGGGAAGGAATGGGAAT
CAGTCATGAGCTAATCACCTGGAGATCAGCTCCCGAGATGTCCCGGATCTGACT
CTAATAGACCTTCCCTGGCATAACCAGAGTGGCTGTGGGCAATCAGCCTGCTGACA
TTGGGTATAAGATCAAGACACTCATCAAGAAGTACATCCAGAGGCAGGAGACAA
TCAGCCTGGTGGTGGTCCCCAGTAATGTGGACATCGCCACCACAGAGGCTCTCAG
15 CATGGCCCAGGAGGTGGACCCCGAGGGAGACAGGACCATCGGAATCTTGACGAA
GCCTGATCTGGTGGACAAAGGAACTGAAGACAAGGTTGTGGACGTGGTGCGGAA
CCTCGTGTTCCACCTGAAGAAGGGTTACATGATTGTCAAGTGCCGGGGCCAGCAG
GAGATCCAGGACCAGCTGAGCCTGTCCGAAGCCCTGCAGAGAGAGAAGATCTTC
TTTGAGAACCACCCATATTTTCAGGGATCTGCTGGAGGAAGGAAAGGCCACGGTT
20 CCCTGCCTGGCAGAAAACTTACCAGCGAGCTCATCACACATATCTGTAAATCTC
TGCCCTGTTAGAAAAATCAAATCAAGGAGACTCACCAGAGAATAACAGAGGAGC
TACAAAAGTATGGTGTGACATAACCGGAAGACGAAAATGAAAAAATGTTCTTCC
TGATAGATAAAATTAATGCCTTTAATCAGGACATCACTGCTCTCATGCAAGGAGA
GGAAACTGTAGGGGAGGAAGACATTCGGCTGTTTACCAGACTCCGACACGAGTT
25 CCACAAATGGAGTACAATAATTGAAAACAATTTTCAAGAAGGCCATAAAATTTT
GAGTAGAAAAATCCAGAAATTTGAAAATCAGTATCGTGGTAGAGAGCTGCCAGG
CTTTGTGAATTACAGGACATTTGAGACAATCGTGAAACAGCAAATCAAGGCACT
GGAAGAGCCGGCTGTGGATATGCTACACACCGTGACGGATATGGTCCGGCTTGC
TTTCACAGATGTTTCGATAAAAAATTTTGAAGAGTTTTTTAACCTCCACAGAACC
30 GCCAAGTCCAAAATTGAAGACATTAGAGCAGAACAAAGAGAGAGAAGGTGAGAA
GCTGATCCGCCTCCACTTCCAGATGGAACAGATTGTCTACTGCCAGGACCAGGTA
TACAGGGGTGCATTGCAGAAGGTCAGAGAGAAGGAGCTGGAAGAAGAAAAGAA
GAAGAAATCCTGGGATTTTGGGGCTTTCCAGTCCAGCTCGGCAACAGACTCTTCC
ATGGAGGAGATCTTTCAGCACCTGATGGCCTATCACCAGGAGGCCAGCAAGCGC
35 ATCTCCAGCCACATCCCTTTGATCATCCAGTTCTTCATGCTCCAGACGTACGGCCA
GCAGCTTCAGAAGGCCATGCTGCAGCTCCTGCAGGACAAGGACACCTACAGCTG
GCTCCTGAAGGAGCGGAGCGACACCAGCGACAAGCGGAAGTTCCTGAAGGAGC
GGCTTGACGGCTGACGCAGGCTCGGCGCCGGCTTGCCCAGTTCCCCGGTTAACC
ACACTCTGTCCAGCCCCGTAGACGTGCACGCACACTGTCTGCCCCCGTTCCCGGG
40 TAGCCACTGGACTGACGACTTGAGTGCTCAGTAGTCAGACTGGATAGTCCGTCTC
TGCTTATCCGTTAGCCGTGGTGATTTAGCAGGAAGCTGTGAGAGCAGTTTGGTTT
CTAGCATGAAGACAGAGCCCCACCCTCAGATGCACATGAGCTGGCGGGATTGAA
GGATGCTGTCTTCGTAAGTGGGAAAGGGATTTTCAGCCCTCAGAATCGCTCCACCT
TGCAGCTCTCCCTTCTCTGTATTCTAGAACTGACACATGCTGAACATCACAG
45 CTTATTTCTCTATTTTTATAATGTCCCTTCACAAACCCAGTGTTTTAGGAGCATGA
GTGCCGTGTGTGTGCGTCCTGCGGAGCCCTGTCTCCTCTCTGTAAATAAATCAT
TTCTAGCCCCG

SEQ ID NO: 190

>gi|184570|gb|M13755.1|HUMIFN15K Human interferon-induced 17-kDa/15-kDa protein mRNA, complete cds

5 CGGCTGAGAGGCAGCGAACTCATCTTTGCCAGTACAGGAGCTTGTGCCGTGGCCC
ACAGCCCACAGCCCACAGCCATGGGCTGGGACCTGACGGTGAAGATGCTGGCGG
GCAACGAATTCCAGGTGTCCCTGAGCAGCTCCATGTCGGTGTGAGAGCTGAAGG
CGCAGATCACCCAGAAGATTGGCGTGCACGCCCTCCAGCAGCGTCTGGCTGTCCA
CCCGAGCGGTGTGGCGCTGCAGGACAGGGTCCCCCTTGCCAGCCAGGGCCTGGG
CCCTGGCAGCACGGTCTGCTGGTGGTGGACAAATGCGACGAACCTCTGAGCAT
10 CCTGGTGAAGGAATAACAAGGGCCGAGCAGCACCTACGAGGTCCGGCTGACGCA
GACCGTGGCCACCTGAAGCAGCAAGTGAGCGGGCTGGAGGGTGTGACAGGACGA
CCTGTTCTGGCTGACCTTCGAGGGGAAGCCCCTGGAGGACCAGCTCCCGCTGGGG
GAGTACGGCCTCAAGCCCCTGAGCACCGTGTTTCATGAATCTGCGCCTGCGGGGA
GGCGGCACAGAGCCTGGCGGGCGGAGCTAAGGGCCTCCACCAGCATCCGAGCAG
15 GATCAAGGGCCGGAAATAAAGGCTGTTGTAAGAGAAT

SEQ ID NO: 191

>gi|183032|gb|M10901.1|HUMGCRA Human glucocorticoid receptor alpha mRNA, complete cds

20 TTTTGTAGAAAAAAATATATTTCCCTCCTGCTCCTTCTGCGTTCACAAGCTAAG
TTGTTTATCTCGGCTGCGGCGGGAAGTGCAGGACGGTGGCGGGCGAGCGGCTCCTC
TGCCAGAGTTGATATTCAGTGTGCTCAGGAGAGGGGAGATGTGATGGACTTCT
AAGAAAACCCAGCAGTGTGCTCAGGAGAGGGGAGATGTGATGGACTTCT
ATAAAACCCTAAGAGGAGGAGCTACTGTGAAGGTTTCTGCGTCTTCACCCTCACT
25 GGCTGTGCTTCTCAATCAGACTCCAAGCAGCGAAGACTTTTGGTTGATTTTCCA
AAAGGCTCAGTAAGCAATGCGCAGCAGCCAGATCTGTCCAAAGCAGTTTCACTC
TCAATGGGACTGTATATGGGAGAGACAGAAACAAAAGTGATGGGAAATGACCTG
GGATTCCACAGCAGGGCCAAATCAGCCTTTCCTCGGGGGAAACAGACTTAAAG
CTTTTGGAAGAAAGCATTGCAAACCTCAATAGGTGACCAAGTGTTCAGAGAAC
30 CCCAAGAGTTCAGCATCCACTGCTGTGTCTGCTGCCCCACAGAGAAGGAGTTTC
CAAAAACCTCACTCTGATGTATCTTCAGAACAGCAACATTTGAAGGGCCAGACTG
GCACCAACGGTGGCAATGTGAAATTGTATACCACAGACCAAAGCACCTTTGACA
TTTTGCAGGATTTGGAGTTTCTTCTGGGTCCCCAGGTAAAGAGACGAATGAGAG
TCCTTGAGATCAGACCTGTTGATAGATGAAAACCTGTTTGCTTTCTCCTCTGGCG
35 GGAGAAGACGATTTCCTTTTGAAGGAAACTCGAATGAGGACTGCAAGCCT
CTCATTTTACCGGACACTAAACCCAAAATTAAGGATAATGGAGATCTGGTTTGT
CAAGCCCCAGTAATGTAACACTGCCCCAAGTGAAAACAGAAAAAGAAGATTTCA
TCGAACTCTGCACCCCTGGGGTAATTAAGCAAGAGAACTGGGCACAGTTTACT
GTCAGGCAAGCTTTCCTGGAGCAAATATAATTGGTAATAAAATGTCTGCCATTTC
40 TGTTTCATGGTGTGAGTACCTCTGGAGGACAGATGTACCACTATGACATGAATACA
GCATCCCTTTCTCAACAGCAGGATCAGAAGCCTATTTTAAATGTCATTCCACCAA
TTCCCGTTGGTTCCGAAAATTGGAATAGGTGCCAAGGATCTGGAGATGACAACTT
GACTTCTCTGGGGACTCTGAACTTCCCTGGTCGAACAGTTTTTCTAATGGCTATT
CAAGCCCCAGCATGAGACCAGATGTAAGCTCTCCTCCATCCAGCTCCTCAACAGC
45 AACAACAGGACCACCTCCCAAACCTCTGCCTGGTGTGCTCTGATGAAGCTTCAGGA
TGTCATTATGGAGTCTTAACTTGTGGAAGCTGTAAAGTTTTCTTCAAAGAGCAG
TGGAAGGACAGCACAATTACCTATGTGCTGGAAGGAATGATTGCATCATCGATA
AAATTCGAAGAAAAAACTGCCAGCATGCCGCTATCGAAAATGTCTTCAGGCTG
GAATGAACCTGGAAGCTCGAAAAACAAAGAAAAAAATAAAAGGAATTCAGCAG

GCCACTACAGGAGTCTCACAAAGAAACCTCTGAAAATCCTGGTAACAAAACAATA
GTTCTGCAACGTTACCACAACCTACCCCTACCCTGGTGTCACTGTTGGAGGTTA
TTGAACCTGAAGTGTTATATGCAGGATATGATAGCTCTGTTCCAGACTCAACTTG
GAGGATCATGACTACGCTCAACATGTTAGGAGGGCGGCAAGTGATTGCAGCAGT
5 GAAATGGGCAAAGGCAATACCAGGTTTCAGGAACTTACACCTGGATGACCAAAT
GACCCTACTGCAGTACTCCTGGATGTTTCTTATGGCATTGCTCTGGGGTGGAGA
TCATATAGACAATCAAGTGCAAACCTGCTGTGTTTTGCTCCTGATCTGATTATTAA
TGAGCAGAGAATGACTCTACCCTGCATGTACGACCAATGTAAACACATGCTGTAT
GTTTCTCTGAGTTACACAGGCTTCAGGTATCTTATGAAGAGTATCTCTGTATGA
10 AAACCTTACTGCTTCTCTCTTCAGTTCCTAAGGACGGTCTGAAGAGCCAAGAGCT
ATTTGATGAAATTAGAATGACCTACATCAAAGAGCTAGGAAAAGCCATTGTCAA
GAGGGAAGGAACTCCAGCCAGAACTGGCAGCGGTTTTATCAACTGACAAAACCT
CTTGGATTCTATGCATGAAGTGGTTGAAAATCTCCTTAACTATTGCTTCCAAACAT
TTTTGGATAAGACCATGAGTATTGAATTCCCCGAGATGTTAGCTGAAATCATCAC
15 CAATCAGATACCAAAATATTCAAATGGAAATATCAAAAAACTTCTGTTTCATCAA
AAGTGACTGCCTTAATAAGAATGGTTGCCTTAAAGAAAGTCGAATTAATAGCTTT
TATTGTATAAACTATCAGTTTGTCTGTAGAGGTTTTGTTGTTTTATTTTTTATTGT
TTTCATCTGTTGTTTTGTTTTAAATACGCACTACATGTGGTTTATAGAGGGCCAAG
ACTTGGCAACAGAAGCAGTTGAGTCGTCACTTTTCAGTGATGGGAGAGTAG
20 ATGGTGAAATTTATTAGTTAATATATCCAGAAATTAGAAACCTTAATATGTGGA
CGTAATCTCCACAGTCAAAGAAGGATGGCACCTAAACCACCAGTGCCCAAAGTC
TGTGTGATGAACCTTCTCTTCATACTTTTTTTCACAGTTGGCTGGATGAAATTTTC
TAGACTTTCTGTTGGTGTATCCCCCCCCCTGTATAGTTAGGATAGCATTTTTGATTT
ATGCATGGAAACCTGAAAAAAAGTTTACAAGTGTATATCAGAAAAGGGAAGTTG
25 TGCCTTTTATAGCTATTACTGTCTGGTTTTAACAATTTCTTTTATATTAGTGAAC
ACGCTTGCTCATTTTTTCTTACATAATTTTTTATTCAAGTTATTGTACAGCTGTTTA
AGATGGGCAGCTAGTTTCGTAGCTTTCCCAAATAAACTCTAAACATTAATCAATCA
TCTGTGTGAAAATGGGTTGGTGTCTTAACCTGATGGCACTTAGCTATCAGAAGA
CCACAAAAATTGACTCAAATCTCCAGTATTCTTGTCAAAAAAAAAAAAAAAAAAAAA
30 GCTCATATTTTGTATATATCTGCTTCAGTGGAGAATTATATAGGTTGTGCAAATTA
ACAGTCCTAACTGGTATAGAGCACCTAGTCCAGTGACCTGCTGGGTAAACTGTGG
ATGATGGTTGCAAAAGACTAATTTAAAAAATAACTACCAAGAGGCCCTGTCTGT
ACCTAACGCCCTATTTTTGCAATGGCTATATGGCAAGAAAGCTGGTAAACTATTT
GTCTTTCAGGACCTTTTGAAGTAGTTTGTATAACTTCTTAAAAGTTGTGATTCCAG
35 ATAACCAGCTGTAACACAGCTGAGAGACTTTTAATCAGACAAAGTAATTCCTCTC
ACTAACTTTACCCAAAACTAAATCTCTAATATGGCAAAAATGGCTAGACACCC
ATTTTCACATTCCCATCTGTACCAATTGGTTAATCTTTCCTGATGGTACAGGAAA
GCTCAGCTACTGATTTTTGTGATTTAGAAGTGTATGTCAGACATCCATGTTTGTA
AACTACACATCCCTAATGTGTGCCATAGAGTTTAACACAAGTCCTGTGAATTTCT
40 TCACTGTTGAAAATTATTTTAAACAAAATAGAAGCTGTAGTAGCCCTTTCTGTGT
GCACCTTACCAACTTTCTGTAAACTCAAACTTAACATATTTACTAAGCCACAAG
AAATTTGATTTCTATTCAAGGTGGCCAAATTATTTGTGTAATAGAAAACCTGAAAA
TCTAATATTAATAAATATGGAACCTTCTAATATATTTTTATATTTAGTTATAGTTTCA
GATATATATCATATTGGTATTCATAATCTGGGAAGGGAAGGGCTACTGCAGCTT
45 TACATGCAATTTATTAATAATGATTGTAAAATAGCTTGTATAGTGTAATAAAGAA
TGATTTTTAGATGAGATTGTTTTATCATGACATGTTATATATTTTTTGTAGGGGTC
AAAGAAATGCTGATGGATAACCTATATGATTTATAGTTTGTACATGCATTCATAC
AGGCAGCGATGGTCTCAGAAACCAACAGTTTGCTCTAGGGGAAGAGGGAGATG
GAGACTGGTCTGTGTGCAGTGAAGGTTGCTGAGGCTCTGACCCAGTGAGATTAC

AGAGGAAGTTATCCTCTGCCTCCCATTCTGACCACCCTTCTCATTCCAACAGTGA
GTCTGTCAGCGCAGGTTTACTCAATCTCCCCTTGCACTAAAGTATGTAAA
GTATGTAAACAGGAGACAGGAAGGTGGTGCTTACATCCTTAAAGGCACCATCTA
ATAGCGGGTTACTTTCACATACAGCCCTCCCCCAGCAGTTGAATGACAACAGAAG
5 CTTCAGAAAGTTTGGCAATAGTTTGCATAGAGGTACCAGCAATATGTAAATAGTGC
AGAATCTCATAGGTTGCCAATAATACTAATTCCTTTCTATCCTACAACAAGAG
TTTATTTCCAAATAAAATGAGGACATGTTTTTGTCTTTGAATGCTTTTTGAAT
GTTATTTGTTATTTTCAGTATTTTGGAGAAATTATTTAATAAAAAACAATCATTT
GCTTTTTG

SEQ ID NO: 192

>gi|340868|gb|M23317.1|HUMCD3E01 Human membrane protein (CD3-epsilon) gene,
exons 1 and 2

TGTTAATAAGAGGCTGCTCCCTGTGCTCCATGCCTGATCCACCACACAGAAAGCA
15 AATTTTCAGTGCATCTCCCTCTTCTGTCAGAGCTTATAGAGGAAGGAAGACCCC
GCAATGTGGAGGCATATTGTATTACAATTACTTTTAATGGCAAAAAGTGCAGTTA
CTTGTGCCAACCTACTACATGGTCTGGACAGCTAAATGTCATGTATTTTTCATGGC
CCCTCCAGGTATTGTGTCAGAGTCCTCTTGTGGCCTTCTAGGAAGGCTGTGGGAC
CCAGCTTTCTTCAACCAGTCCAGGTGGAGGCCTCTGCCTTGAACGTTTCCAAGTG
20 AGGTAAAACCCGCAGGCCCCAGAGGCCTCTACTTCCTGTGTGAGGTTCAGAAAC
CCTCCTCCCCTCCCAGCCTCAGGTGCCTGCTTCAGAAAATGGTGAGTCTCTCTCTT
ATAAAGCCCTCCTTTTTTCATCCTAGCATTGGGAGCAATGGCCCCAGGGTCTTAT
CTCTAGCAGATGTTTTGAAAAAGTCATCTGTTTTGCTTTTTTCCAGAAGTAGTAA
GTCTGCTGGCCTCCGCCATCTTAGTAAAGTAACAGTCCCATGAAACAAAGATGCA
25 GTCGGGCACTCACTGGAGAGTTCTGGGCCTCTGCCTCTTATCAGGTGAGTAGGAT
GGA

SEQ ID NO: 193

>gi|307505|gb|L12350.1|HUMTHRSPO Human thrombospondin 2 (THBS2) mRNA,
complete cds

ACGGCATCCAGTACAGAGGGGCTGGACTTGGACCCCTGCAGCAGCCCTGCACAG
GAGAAGCGGCATATAAAGCCGCGCTGCCCCGGAGCCGCTCGGCCACGTCCACCG
GAGCATCCTGCACTGCAGGGCCGGTCTCTCGCTCCAGCAGAGCCTGCGCCTTTCT
GACTCGGTCCGGAACACTGAAACCAGTCATCACTGCATCTTTTTGGCAAACCAGG
35 AGCTCAGCTGCAGGAGGCAGGATGGTCTGGAGGCTGGTCCTGCTGGCTCTGTGG
GTGTGGCCCAGCACGCAAGCTGGTCACCAGGACAAAGACACGACCTTCGACCTT
TTCAGTATCAGCAACATCAACCGCAAGACCATTGGCGCCAAGCAGTTCGCGGGG
CCCGACCCCGGCGTGCCGGCTTACCGCTTCGTGCGCTTTGACTACATCCCACCGG
TGAACGCAGATGACCTCAGCAAGATCACCAAGATCATGCGGCAGAAGGAGGGCT
40 TCTTCCTCACGGCCCAGCTCAAGCAGGACGGCAAGTCCAGGGGCACGCTGTTGG
CTCTGGAGGGCCCCGGTCTCTCCAGAGGCAGTTCGAGATCGTCTCCAACGGCCC
CGCGGACACGCTGGATCTCACCTACTGGATTGACGGCACCCGGCATGTGGTCTCC
CTGGAGGACGTCGGCCTGGCTGACTCGCAGTGGAAGAACGTCACCGTGCAGGTG
GCTGGCGAGACCTACAGCTTGCACGTGGGCTGCGACCTCATAGGACCAGTTGCTC
45 TGGACGAGCCCTTCTACGAGCACCTGCAGGCGGAAAAGAGCCGGATGTACGTGG
CCAAAGGCTCTGCCAGAGAGAGTCACTTCAGGGGTTTGCTTCAGAACGTCCACCT
AGTGTTTGAAGAACTCTGTGGAAGATATTCTAAGCAAGAAGGGTTGCCAGCAAGG
CCAGGGAGCTGAGATCAACGCCATCAGTGAGAACACAGAGACGCTGCGCCTGGG
TCCGCATGTCACCACCGAGTACGTGGGCCCCAGCTCGGAGAGGAGGCCCGAGGT

GTGCGAACGCTCGTGCGAGGAGCTGGGAAACATGGTCCAGGAGCTCTCGGGGCT
CCACGTCTCTCGTGAACCAGCTCAGCGAGAACCCTCAAGAGAGTGTCGAATGATAA
CCAGTTTCTCTGGGAGCTCATTGGTGGCCCTCCTAAGACAAGGAACATGTCAGCT
TGCTGGCAGGATGGCCGGTTCTTTGCGGAAAATGAAACGTGGGTGGTGGACAGC
5 TGCACCACGTGTACCTGCAAGAAATTTAAAACCATTTGCCACCAAATCACCTGCC
CGCTGCAACCTGCGCCAGTCCATCCTTTGTGGAAGGCGAATGCTGCCCTTCCTG
CCTCCACTCGGTGGACGGTGAGGAGGGCTGGTCTCCGTGGGCAGAGTGGACCCA
GTGCTCCGTGACGTGTGGCTCTGGGACCCAGCAGAGAGGGCCGGTCTGTGACGTC
ACCAGCAACACCTGCTTGGGGCCCTCGATCCAGACACGGGCTTGACAGTCTGAGC
10 AAGTGTGACACCCGCATCCGGCAGGACGGCGGCTGGAGCCACTGGTCACCTTGG
TCTTCATGCTCTGTGACCTGTGGAGTTGGCAATATCACACGCATCCGTCTCTGCA
ACTCCCCAGTGCCCCAGATGGGGGGCAAGAATTGCAAAGGGAGTGGCCGGGAGA
CCAAAGCCTGCCAGGGCGCCCCATGCCCAATCGATGGCCGCTGGAGCCCCTGGT
CCCCGTGGTTCGGCCTGCACTGTACCTGTGCCGGTGGGATCCGGGAGCGCACCCG
15 GGTCTGCAACAGCCCTGAGCCTCAGTACGGAGGGAAGGCCTGCGTGGGGGATGT
GCAGGAGCGTCAGATGTGCAACAAGAGGAGCTGCCCCGTGGATGGCTGTTTATC
CAACCCCTGCTTCCCGGGAGCCCAGTGCAGCAGCTTCCCCGATGGGTCTGGTCA
TGCGGCTTCTGCCCTGTGGGCTTCTTGGGCAATGGCACCCACTGTGAGGACCTGG
ACGAGTGTGCCCTGGTCCCCGACATCTGCTTCTCCACCAGCAAGGTGCCTCGCTG
20 TGTCAACACTCAGCCTGGCTTCCACTGCCTGCCCTGCCCGCCCCGATACAGAGGG
AACCAGCCCGTTCGGGGTTCGGCCTGGAAGCAGCCAAGACGGAAAAGCAAGTGTGT
GAGCCCCGAAAACCCATGCAAGGACAAGACACACAACCTGCCACAAGCACGCGGA
GTGCATCTACCTGGGTCACTTCAGCGACCCCATGTACAAGTGCAGAGTGCCAGACA
GGCTACGCGGGCGACGGGCTCATCTGCGGGGAGGACTCGGACCTGGACGGCTGG
25 CCAAACCTCAATCTGGTCTGCGCCACCAACGCCACCTACCACTGCATCAAGGATA
ACTGCCCCCATCTGCCAAATTCTGGGCAGGAAGACTTTGACAAGGACGGGATTG
GCGATGCCTGTGATGATGACGATGACAATGACGGTGTGACCGATGAGAAGGACA
ACTGCCAGCTCCTCTTCAATCCCCGCCAGGCTGACTATGACAAGGATGAGGTTGG
GGACCGCTGTGACAACTGCCCTTACGTGCACAACCCTGCCAGATCGACACAGA
30 CAACAATGGAGAGGGTGACGCCTGCTCCGTGGACATTGATGGGGACGATGTCTT
CAATGAACGAGACAATTGTCCCTACGTCTACAACACTGACCAGAGGGACACGGA
TGGTGACGGTGTGGGGGATCACTGTGACAACTGCCCCCTGGTGCACAACCCTGAC
CAGACCGACGTGGACAATGACCTTGTGGGGACCAGTGTGACAACAACGAGGAC
ATAGATGACGACGGCCACCAGAACAAACCAGGACAACCTGCCCTACATCTCCAAC
35 GCCAACCAGGCTGACCATGACAGAGACGGCCAGGGCGACGCCTGTGACCCTGAT
GATGACAACGATGGCGTCCCCGATGACAGGGACAACCTGCCGGCTTGTGTTCAAC
CCAGACCAGGAGGACTTGGACGGTGTGACGGGGTGATATTTGTAAAGATGAT
TTTGACAATGACAACATCCCAGATATTGATGATGTGTGTCCTGAAAACAATGCCA
TCAGTGAGACAGACTTCAGGAACCTCCAGATGGTCCCCTTGGATCCCAAAGGGA
40 CCACCCAAATTGATCCCAACTGGGTCAATTCGCCATCAAGGCAAGGAGCTGGTTCA
GACAGCCAACTCGGACCCCCGGCATCGCTGTAGGTTTTGACGAGTTTGGGTCTGTG
GACTTCAGTGGCACATTCTACGTAAACACTGACCGGGACGACGACTATGCTGGCT
TCGTCTTTGGTTACCAGTCAAGCAGCCGCTTCTATGTGGTGTGTTGGAAGCAGGT
GACGCAGACCTACTGGGAGGACCAGCCACGCGGGCCTATGGCTACTCCGGCGT
45 GTCCCTCAAGGTGGTGAACCTCCACCACGGGGACGGGCGAGCACCTGAGGAACGC
GCTGTGGCACACGGGGAACACGCCGGGGCAGGTGCGAACCTTATGGCACGACCC
CAGGAACATTGGCTGGAAGGACTACACGGCCTATAGGTGGCACCTGACTCACAG
GCCCAAGACCGGCTACATCAGAGTCTTAGTGCATGAAGGAAAACAGGTCATGGC
AGACTCAGGACCTATCTATGACCAAACCTACGCTGGCGGGCGGCTGGGTCTATTT

GTCTTCTCTCAAGAAATGGTCTATTTCTCAGACCTCAAGTACGAATGCAGAGATA
TTTAAACAAGATTTGCTGCATTTCCGGCAATGCCCTGTGCATGCCATGGTCCCTA
GACACCTCAGTTCATTGTGGTCCTTGC GGCTTCTCTCTCTAGCAGCACCTCCTGTC
CCTTGACCTTAACTCTGATGGTTCTTCACCTCCTGCCAGCAACCCCAAACCCAAG
5 TGCCTTCAGAGGATAAATATCAATGGAACCTCAGAGATGAACATCTAACCCACTA
GAGGAAACCAGTTTGGTGATATATGAGACTTTATGTGGAGTGAAAATTGGGCAT
GCCATTACATTGCTTTTTCTTGTTTGTAAAAAGAATGACGTTTACATATAAAAT
GTAATTACTTATTGTATTTATGTGTATATGGAGTTGAAGGGAATACTGTGCATAA
GCCATTATGATAAATTAAGCATGAAAAATATTGCTGAACTACTTTTGGTGCTTAA
10 AGTTGTCACTATTCTTGAATTAGAGTTGCTCTACAATGACACACAAATCCCGCTA
AATAAATTATAACAAGGGTCAATTCAAATTTGAAGTAATGTTTTAGTAAGGAG
AGATTAGAAGACAACAGGCATAGCAAATGACATAAGCTACCGATTAACTAATCG
GAACATGTAAACAGTTACAAAAATAAACGAACTCTCCTCTTGTCCTACAATGAA
AGCCCTCATGTGCAGTAGAGATGCAGTTTCATCAAAGAACAACATCCTTGCAA
15 ATGGGTGTGACGCGGTTCCAGATGTGGATTTGGCAAAACCTCATTTAAGTAAAAG
GTTAGCAGAGCAAAGTGCGGTGCTTTAGCTGCTGCTTGTGCCGTTGTGGCGTCGG
GGAGGCTCCTGCCTGAGCTTCCCTCCCCAGCTTTGCTGCCTGAGAGGAACCAGAG
CAGACGCACAGGCCGGAAGGGCGCATCTAACGCGTATCTAGGCTTTGGTAACT
GCGGACAAGTTGCTTTTACCTGATTTGATGATACATTTCAATTAAGGTTCCAGTTAT
20 AAATATTTTGTAAATATTTATTAAGTGACTATAGAATGCAACTCCATTTACCAGTA
ACTTATTTTAAATATGCCTAGTAACACATATGTAGTATAATTTCTAGAAACAAAC
ATCTAATAAGTATATAATCCTGTGAAAATATGAGGCTTGATAATATTAGGTTGTC
ACGATGAAGCATGCTAGAAGCTGTAACAGAATACATAGAGAATAATGAGGAGTT
ATGATGGAACCTTAATATATAATGTTGCCAGCGATTTTAGTTCAATATTTGTTAC
25 TGTATCTATCTGCTGTATATGGAATTCTTTAATTCAAACGCTGAAAACGAATCA
GCATTTAGTCTTGCCAGGCACACCCAATAATCAGTCATGTGTAATATGCACAAGT
TTGTTTTTGTTTTTTGTTTTTTTTGTGGTTGGTTTTTTTGTCTTAAGTTGCATGATCT
TTCTGCAGGAAATAGTCACTCATCCACTCCACATAAGGGGTTTAGTAAGAGAAG
TCTGTCTGTCTGATGATGGATAGGGGGCAAATCTTTTTCCCTTTCTGTAAATAGT
30 CATCACATTTCTATGCCAAACAGGAACGATCCATAACTTTAGTCTTAATGTACAC
ATTGCATTTTGATAAAAATTAATTTTGTGTTCCTTTGAGGTTGATCGTTGTGTTGT
TTTGCTGCACTTTTTACTTTTTTGC GTGTGGAGCTGTATTCCCGAGACAACGAAGC
GTTGGGATACTTCATTAAATGTAGCGACTGTCAACAGCGTGCAGGTTTTCTGTTT
CTGTGTTGTGGGGTCAACCGTACAATGGTGTGGGAATGACGATGATGTGAATATT
35 TAGAATGTACCATATTTTTTGTAAATTATTTATGTTTTTCTAAACAAATTTATCGT
ATAGGTTGATGAAACGTCATGTGTTTTGCCAAAGACTGTAAATATTTATTTATGT
GTTACATGGTCAAAATTTCACTACTGAAACCCTGCACTTAGCTAGAACCCTCATT
TTTAAAGATTAACAACAGGAAATAAATTGTAAAAAAGGTTTTCT

40 SEQ ID NO: 194

>2499967T6

AGAAAAGAGGGAAGGTGGGGACCTAGTAACAATAACCATTTATTCCAAGGAGGC
CCTGGCCCTGAACCCGGGGTTCACACAGGAATCAGGGAGGCACCTGAGTCCCCC
AGGACCAGGGCATCCCAAGGCATCATGGCAGCNGCGTTGTTCAAAAGGAAGTTT
45 CATTGAGCTTCATCTTGGGAGGNGTGANGCGNGTCCCGANACCGCTGGACGCCC
ACGNNNCTGGNGTGGGTNGCCGTCCGGANGTCTGGCCCACTCCGCACCAGTTCTT
GGCAGCGTTCCACAAAGCTGCNCCCACCACGGCGCCGGGCCTCAGCCTGCGGGG
GGCTTGGGCTCCACGGTGGCCAGACAAGGAGGTGTTGCTGGAGGCTGAGTGGA
GGCTGGTGAGGGAGATGCGGGGTGANGGGCTGGGGAGACAGCNCCATGAGGGA

GCTGAAGGAGCNGGCGGGGGCAGCTCACAGTGTTTCAGCTGTTCCATCAGCTCTT
GCTNCGTTANGCCACCTGCAAGGGGGCTGGCCGAGGNCGTNCATGGNGGTGGT

SEQ ID NO: 195

5 >093603H1

TGGAAATAAAGCTTCCTNAATGTNGTATATGTNTTTAAAGTNCATCCGTGCATTT
TTTTTNAGCATCCAACCATTCCTCCCTTGTAAGTTCTCGCCCCCTCAAATNACCCTC
TCCCGTAGCCACCCGACTAACATCTCANTNTCTGAAAATGCACAGAGATGCCTG
GCTACCTCGCCCTGCCTTCAGCCTCACGGGGCTCAGGTNCTTTTTTTNTTTGGTGC
10 CACCAGGNCGGAGCATGGAGGTCACAGTACCTGCCACC

SEQ ID NO: 196

>gi|30081|emb|X57527.1|HSCOL8A1 Human COL8A1 mRNA for alpha 1(VIII) collagen

ATGGCTGTGCTGCCTGGCCCTCTGCAGCTGCTGGGAGTGCTGCTTACCATTTCCTT
15 GAGTTCATCAGGCTCATTAGGCTGGTGCCTACTATGGGATCAAGCCGCTGCCA
CCTCAAATTCCTCCTCAGATGCCACCACAAATTCACAATACCAGCCCCCTGGGTC
AGCAAGTACCTCACATGCCTTTGGCCAAAGATGGCCTCGCCATGGGCAAGGAGA
TGCCCCACTTGCAGTATGGCAAAGAGTATCCACACCTACCCCAATATATGAAGGA
AATTCAACCGGCGCCAAGAATGGGCAAGGAAGCCGTTCCCAAGAAAGGCAAAG
20 AAATACCATTAGCCAGTTTACGAGGGGAACAAGGTCCCCGTGGAGAGCCTGGCC
CAAGAGGACCACCTGGGCCCCCTGGTTTACCAGGTCATGGGATACCTGGAATTA
AAGGAAAACCAAGGGCCACAGGGATATCCAGGAGTTGGAAAGCCAGGTATGCCTG
GAATGCCAGGGAAGCCAGGAGCCATGGGCATGCCTGGGGCAAAGGAGAAATT
GGACAGAAAGGGGAAATTGGGCCTATGGGGATCCCAGGACCACAAGGACCTCCA
25 GGGCCTCATGGACTTCCTGGCATTGGGAAGCCAGGTGGGCCAGGGTTACCAGGG
CAACCAGGACCAAAGGGTGATCGAGGACCCAAAGGACTACCAGGACCTCAAGG
CCTTCGGGGTCCTAAAGGAGACAAGGGCTTCGGGGATGCCAGGTGCGCCAGGTGT
AAAGGGGGCCTCCAGGGATGCACGGCCTCCCCGGCCCTGTTGGACTGCCAGGAGT
GGGCAAACCAGGAGTGACAGGCTTCCCTGGGCCCCAGGGCCCCCTGGGAAAGCC
30 AGGGGCTCCAGGAGAACCCGGTCGACAAGGCCCTATTGGGGTACCGGGGGTTCA
AGGACCTCCTGGGATACCCGGAATTGGAAAGCCAGGCCAGGATGGGATCCCAGG
CCAGCCAGGATTTCCAGGTGGCAAAGGGGAGCAAGGACTGCCAGGGCTACCAGG
GGCCCCAGGCCTTCCAGGGATTGGGAAACCAGGCTTCCCAGGACCCAAAGGTGA
CCGGGGCATGGGAGGTGTTCTTGGGGCTCTTGGACCAAGAGGGGAGAAAGGACC
35 AATAGGTTCCCCAGGAATAGGGGGTTCTCCAGGAGAGCCAGGCCTGCCTGGAAT
CCCAGGTCCTATGGGCCCTCCAGGTGCTATTGGTTTTCTTGACCCAAAGGAGAA
GGTGGGATTGTAGGGCCACAGGGGGCCACCAGGTCCCAAGGGTGAGCCAGGGCTT
CAAGGCTTCCCAGGAAAGCCAGGTTTCTTGGTGAAGTAGGGCCTCCTGGCATGA
GGGGTTTCCCAGGTCCCATAGGCCCAAGGGGGAACATGGGCAAAAAGGTGTAC
40 CAGGACTCCCTGGTGTTCAGGGCTTCTCGGACCTAAGGGAGAACCAGGAATCC
CAGGGGATCAGGGTTTACAGGGCCCCCAGGTATCCCAGGGATTGGGGGCCCTA
GTGGCCCCATTGGACCACCTGGGATTCCAGGCCCCAAAGGGGAGCCTGGCCTCC
CAGGGCCCCCTGGGTTCCCTGGTATAGGGAAACCCGGAGTGGCAGGACTTCATG
GCCCCCAGGGAAGCCTGGTGCCCTTGGTCCTCAAGGCCAGCCTGGCCTTCCAGG
45 ACCCCCAGGCCCTCCAGGACCTCCAGGACCCCCAGCTGTGATGCCCCCTACACCA
CCACCCAGGGAGAGTATCTGCCAGATATGGGGCTGGGAATTGATGGCGTGAAA
CCCCCCCATGCTACGGGGGGCTAAGAAAGGCAAGAATGGAGGGGCCAGCCTATGAG
ATGCCTGCATTTACCGCCGAGCTAACCGCACCCCTTCCACCGGTGGGGGGCCAG
TGAAGTTTAACAAACTGCTGTATAACGGCAGACAGAAGTACAACCCGCAGACAG

GCATCTTCACCTGTGAGGTCCCTGGTGTCTACTACTTTGCATACCACGTTCACTGC
AAGGGGGGGAACGTGTGGGTTGCTCTATTCAAGAACAACGAGCCCGTGATGTAC
ACGTACGACGAGTACAAAAAGGGCTTCCTGGACCAGGCATCTGGGAGTGACAGTG
CTGCTGCTCAGGCCCCGGAGACCGGGTGTTCCTCCAGATGCCCTCAGAACAGGCTG
5 CAGGACTGTATGCCGGGCAGTATGTCCACTCCTCCTTTTCAGGATATTTATTGTAT
CCCATGTAA

SEQ ID NO: 197

>g1949404

10 ACCCACAGGGCCCCTACCCACAAGAGGGGCTACCCACAGGGCCCCTACCCCCAAG
GGGGCTACCCCCAGGGGCCATATCCCCAGAGCCCCTTCCCCCCTATCCCCTATGG
ACAGCCACAGGTCTTCCCAGGACAAGACCCTGACTCACCCAGCATGGAACTA
CCAGGNGGAGGGTCCCCCATCCTACTATGACAACCAGGACTTTCCTGCCAACAAAC
15 TGGGATGACAAGAGCATCCGACAAGNCTTCATCCGCAAGTGTTCTAGTGCTTGA
CCT

SEQ ID NO: 198

>gi|1057867|gb|H79778.1|H79778.yu77h11.r1 Soares fetal liver spleen 1NFLS Homo
sapiens cDNA clone IMAGE:239877 5' similar to SP:S43160 S43160 YEAST RPD3

20 HOMOLOG - AFRICAN CLAWED FROG ;, mRNA sequence

NGTTATCAACCAGGTAGTGGACTTCTACCAACCCACGTGCATTGTGCTCCAGTGT
GGANTGGACTCTCTGGGCTGTGATCGATTGGGCTGCTTTAACCTCAGCATCCGAG
GGCATGGGGAATGCGTTGAATATGTCAAGAGCTTCAATATCCCTCTACTCGTGCT
GGGTGGTGGTGGTTATACTGTCCGAAATGTTGCCGCTGCTGGACATATGAGACA
25 TCGCTGCTGGTAGAAGAGGCCATTAGTGAGGAGCTTCCCTATAGTGAATACTTCG
AGTACTTTGCCCCAGACTTCACACTTCATCCAGATGTCAGCACCTCATCGAGAA
TCAGAACTTCACGNCATATCTNGGAACCAGATCCGCCAGACAATCTTTGAAAACC
CTGGAAGATGCTGGAACCTGGCACNTAGTGTTCCAGATTCATGGACGTGCCTGCA
GAC

30

SEQ ID NO: 199

>gi|3928429|emb|X72781.1|HSTRPIV Homo sapiens mRNA for trypsinogen IV a-form

GGGCCTGGAGCTGCACCCGCTTCTGGGTGGACGCACTTGGCGAGCGGCGCGGGA
TGCAGACGGCTGCGAGGCGCTGGGCACAGTTGCTGTCCCCTTTGACGATGATGAC
35 AAGATTGTTGGGGGCTACACCTGTGAGGAGAATTCTCTCCCCTACCAGGTGTCCC
TGAATTCTGGCTCCCCTTCTGCGGTGGCTCCCTCATCAGCGAACAGTGGGTGGT
ATCAGCAGCTCACTGCTACAAGACCCGCATCCAGGTGAGACTGGGAGAGCACAA
CATCAAAGTCCTGGAGGGGAATGAGCAGTTCATCAATGCGGCCAAGATCATCCG
CCACCCTAAATACAACAGGGGACACTCTGGACAATGACATCATGCTGATCAAAC
40 CTCCTCACCTGCCGTCATCAATGCCCGCGTGTCCACCATCTCTCTGCCACCGCCC
CTCCAGCTGCTGGCACTGAGTGCCTCATCTCCGGCTGGGGCAACACTCTGAGCTT
TGGTGCTGACTACCCAGACGAGCTGAAGTGCCTGGATGCTCCGGTGCTGACCCAG
GCTGAGTGTAAGCCTCCTACCCTGGAAAGATTACCAACAGCATGTTCTGTGTGG
GCTTCCTTGAGGGAGGCAAGGATTCTGCCAGCGTGACTCTGGTGGCCCTGTGGT
45 CTGCAACGGACAGCTCCAAGGAGTTGTCTCCTGGGGCCATGGCTGTGCCTGGAA
GAACAGGCCTGGAGTCTACACCAAGGTCTACAACATATGTGGACTGGATTAAGGA
CACCATCGCTGCCAACAGCTAAAGCCCCCGGTCCCTCTGCAGTCTCTATACCAAT
AAAGTGGCCCTGCTCTCAAAAAAAAAAAAAAAAAA

SEQ ID NO: 200

>5171695H1

GGATGCTGTAAAAGTAGAAGAGGAATTGACCCTATCTTGGACAGCACCTGGAGA
AGACTTTGATCAGGGCCAGGCTACAAGCTATGAAATAAGAATGAGTAAAAGTCT
5 ACAGAATATCCAAGATGACTTTAACAATGCTATTTTAGTAAATACATCAAAGCGA
AATCCTCAGCAAGCTGGCATCAGGGAGATATTTACGTTCTCACCCCAAATTTCCA
CGAATGGACCTGAACATCAGCCAAATGGAGAAACACAT

SEQ ID NO: 201

10 >gi|182734|gb|K00650.1|HUMFOS Human fos proto-oncogene (c-fos), complete cds
GCAGGAACAGTGCTAGTATTGCTCGAGCCCGAGGGCTGGAGGTTAGGGGATGAA
GGTCTGCTTCCACGCTTTGCACTGAATTAGGGCTAGAATTGGGGATGGGGGTAGG
GGCGCATTCCTTCGGGAGCCGAGGCTTAAGTCCTCGGGGTCCTGTACTCGATGCC
GTTTCTCCTATCTCTGAGCCTCAGAACTGTCTTCAGTTTCCGTACAAGGGTAAAA
15 AGGCGCTCTCTGCCCCATCCCCCCCCGACCTCGGGAACAAGGGTCCGCATTGAACC
AGGTGCGAATGTTCTCTCTCATTCTGCGCCGTTCCCGCCTCCCCCAGCCGC
GGCCCCCGCCTCCCCCGCACTGCACCCTCGGTGTTGGCTGCAGCCCGCGAGCAG
TTCCCGTCAATCCCTCCCCCCTTACACAGGATGTCCATATTAGGACATCTGCGTCA
GCAGGTTTCCACGGCCTTTCCCTGTAGCCCTGGGGGGAGCCATCCCCGAAACCCC
20 TCATCTTGGGGGGGCCACGAGACCTCTGAGACAGGAAGTGCGAAATGCTCACGA
GATTAGGACACGCGCCAAGGCGGGGGCAGGGAGCTGCGAGCGCTGGGGACGCA
GCCGGGCGGCCGCGAGAAGCGCCAGGCCCGCGCGCCACCCCTCTGGCGGCCACCG
TGGTTGAGCCCGTGACGTTTACACTCATTCTATAAAACGCTTGTTATAAAAGCAGT
GGCTGCGGGCGCCTCGTACTCCAACCGCATCTGCAGCGAGCAACTGAGAAGCCAA
25 GACTGAGCCGGCGGCCGCGGCGCAGCGAACGAGCAGTGACCGTGCTCCTACCCA
GCTCTGCTTCACAGCGCCACCTGTCTCCGCCCCCTCGGCCCCCTCGCCCGGCTTTGC
CTAACCGCCACGATGATGTTCTCGGGCTTCAACGCAGACTACGAGGCGTCATCCT
CCCGCTGCAGCAGCGCGTCCCCGGCCGGGGATAGCCTCTCTTACTACCACTCACC
CGCAGACTCCTTCTCCAGCATGGGCTCGCCTGTCAACGCGCAGGTAAGGCTGGCT
30 TCCCGTCGCCGCGGGGCGGGGGCTTGGGGTCGCGGAGGAGGAGACACCGGGCG
GGACGCTCCAGTAGATGAGTAGGGGGCTCCCTTGTGCCTGGAGGGAGGCTGCCG
TGGCCGGAGCGGTGCCGGCTCGGGGGCTCGGGACTTGCTCTGAGCGCACGCACG
CTTGCCATAGTAAGAATTGGTTCCCCCTTCGGGAGGCAGGTTCTGTTCTGAGCAAC
CTCTGGTCTGCACTCCAGGACGGATCTCTGACATTAGCTGGAGCAGACGTGTCCC
35 AAGCACAACTCGCTAACTAGAGCCTGGCTTCTTCGGGGAGGTGGCAGAAAGCG
GCAATCCCCCCTCCCCCGGCAGCCTGGAGCACGGAGGAGGGATGAGGGAGGAGG
GTGCAGCGGGCGGGTGTGTAAGGCAGTTTCATTGATAAAAAGCGAGTTCATTCTG
GAGACTCCGGAGCGGCGCCTGCGTCAGCGCAGACGTCAGGGATATTTATAACAA
ACCCCTTTCAAGCAAGTGATGCTGAAGGGATAACGGGAACGCAGCGGCAGGAT
40 GGAAGAGACAGGCACTGCGCTGCGGAATGCCTGGGAGGAAAAGGGGGAGACCT
TTCATCCAGGATGAGGGACATTTAAGATGAAATGTCCGTGGCAGGATCGTTTCTC
TTCCTGCTGCATGCGGCACTGGGAACCTCGCCCCACCTGTGTCCGGAACCTGCTC
GCTCACGTCGGCTTTCCCTTCTGTTTTGTTCTAGGACTTCTGCACGGACCTGGCC
GTCTCCAGTGCCAACTTCATTCCCACGGTCACTGCCATCTCGACCAGTCCGGACC
45 TGCAGTGGCTGGTGCAGCCCGCCCTCGTCTCCTCTGTGGCCCCATCGCAGACCAG
AGCCCTCACCTTTTCGGAGTCCCCGCCCCCTCCGCTGGGGGCTTACTCCAGGGCT
GGCGTTGTGAAGACCATGACAGGAGGCCGAGCGCAGAGCATTGGCAGGAGGGG
CAAGGTGGAACAGGTGAGGAACTCTAGCGTACTCTTCTGGAATGTGGGGGCT
GGGTGGGAAGCAGCCCCGGAGATGCAGGAGCCAGTACAGAGGATGAAGCCAC

TGATGGGGCTGGCTGCACATCCGTAACCTGGGAGCCCTGGCTCCAAGCCCATTCCA
 TCCCAACTCAGACTCTGAGTCTCACCTAAGAAGTACTCTCATAGTTTCTTCCCTA
 AGTTTCTTACCGCATGCTTTCAGACTGGGCTCTTCTTTGTTCTCTTGCTGAGGATC
 TTATTTTAAATGCAAGTCACACCTATTCTGCAACTGCAGGTCAGAAATGGTTTCA
 5 CAGTGGGGTGCCAGGAAGCAGGGAAGCTGCAGGAGCCAGTTCTACTGGGGTGGG
 TGAATGGAGGTGATGGCAGACACTTTTACTGAATGTCGGTCTTTTTTTGTGATTAT
 TCTAGTTATCTCCAGAAGAAGAAGAGAAAAGGAGAATCCGAAGGGAAAGGAAT
 AAGATGGCTGCAGCCAAATGCCGCAACCGGAGGAGGGAGCTGACTGATACACTC
 CAAGCGGTAGGTACTCTGTGGGTGCTCCTTTTTTAAACTTAAGGGAAAGTTGGA
 10 GATTGAGCATAAGGGCCCTTGAGTAAGACTGTGTCTTATGCTTTCCTTTATCCCTC
 TGTATACAGGAGACAGACCAACTAGAAGATGAGAAGTCTGCTTTGCAGACCGAG
 ATTGCCAACCTGCTGAAGGAGAAGGAAAACTAGAGTTCATCCTGGCAGCTCAC
 CGACCTGCCTGCAAGATCCCTGATGACCTGGGCTTCCCAGAAGAGATGTCTGTGG
 CTTCCCTTGATCTGACTGGGGGCCTGCCAGAGGTTGCCACCCCGGAGTCTGAGGA
 15 GGCTTTCACCCTGCCTCTCCTCAATGACCCTGAGCCCAAGCCCTCAGTGGAACCT
 GTCAAGAGCATCAGCAGCATGGAGCTGAAGACCGAGCCCTTTGATGACTTCCTGT
 TCCCAGCATCATCCAGGCCCAGTGGCTCTGAGACAGCCCGCTCCGTGCCAGACAT
 GGACCTATCTGGGTCTTCTATGCAGCAGACTGGGAGCCTCTGCACAGTGGCTCC
 CTGGGGATGGGGCCCATGGCCACAGAGCTGGAGCCCTGTGCACTCCGGTGGTC
 20 ACCTGTACTCCCAGCTGCACTGCTTACACGTCTTCCTTCGTCTTCACCTACCCCGA
 GGCTGACTCCTTCCCCAGCTGTGCAGCTGCCACCCGCAAGGGCAGCAGCAGCAA
 TGAGCCTTCTCTGACTCGCTCAGCTCACCCACGCTGCTGGCCCTGTGAGGGGGC
 AGGGAAGGGGAGGCAGCCGGCACCCACAAGTGCCACTGCCCCAGCTGGTGCATT
 ACAGAGAGGAGAAACACATCTTCCCTAGAGGGTTCTGTAGACCTAGGGAGGAC
 25 CTTATCTGTGCGTGAAACACACCAGGCTGTGGGCCTCAAGGACTTGAAAGCATCC
 ATGTGTGGACTCAAGTCCTTACCTCTTCCGGAGATGTAGCAAAACGCATGGAGTG
 TGTATTGTTCCCAGTGACACTTCAGAGAGCTGGTAGTTAGTAGCATGTTGAGCCA
 GGCTGGGTCTGTGTCTCTTTTCTCTTCTCCTTAGTCTTCTCATAGCATTAACTAA
 TCTATTGGGTTTCAATTATTGGAATTAACCTGGTGTGGATATTTTCAAATTGTATCT
 30 AGTGCAGCTGATTTTAAACAATAACTACTGTGTTCCCTGGCAATAGTGTGTTCTGATT
 AGAAATGACCAATATTATACTAAGAAAAGATACGACTTTATTTTCTGGTAGATAG
 AAATAAATAGCTATATCCATGTACTGTAGTTTTTCTTCAACATCAATGTTTATTGT
 AATGTTACTGATCATGCATTGTTGAGGTGGTCTGAATGTTCTGACATTAACAGTTT
 TCCATGAAAACGTTTTATTGTGTTTTTAATTTATTTATTAAGATGGATTCTCAGAT
 35 ATTTATATTTTTATTTTATTTTTTCTACCTTGAGGTCTTTTGACATGTGGAAAGTG
 AATTTGAATGAAAAATTTAAGCATTGTTTGCTTATTGTTCCAAGACATTGTCAAT
 AAAAGCATTTAAGTTGAATGCGACCAACCTTGTGCTCTTTTCATTCTGGAAGTCTT
 GTAAGTTTCTGAAAGGTATTATTGGAGACCAGTTTGTCAAGAAGGGTAGCTGCTG
 GAGGGGGACACACCCTCTGTCTGATCCCTTATCAAAGAGGACAAGGAAACTATA
 40 GAGCTGATTTTAGAATATTTTACAAATACATGCCTTCCATTGGAATGCTAAGATT
 TTCTACTGCTTCTGGGGACGGGAAACCGCTGTGTAACAGCTTTTGTGGGAATACA
 TTTTTTCTGTTTCAGTACTCGCAGGGGGAAATATTTAAATTTTGTGTTGTGCTAATAT
 TAAATTCAGATGTTTTGATCTTAAAGGAACCTTTAAGCAAACAGAACCTAGCTT
 TGTACAGACTATTTTAACTTTTTATTCTCACAAAATCACGTGGAGGGTTATTCTAC
 45 TTCAAAGATGAGCAAATTGAAGAATGGTTAGAATAAACAACTTTCTTGATATTCC
 GTTATCGGCATTAGAATCTTCTGCTCGTTATCGTATCCAGCAGGCTGAACTGCCT
 CTTGATACTTGGTTAAAAAAAATTTTCAGGCCGGGCGCGGTGGCCCATGCCTGTA
 ATCCTAGCACTTTGGGAGGCGGAGGCAGGCGGATCACCTGAGGTCGGGAGTTTCG
 AGACCAGCCTGACCAACATGGAGAAACCCCGTCTTTACTAAAAATACAAAATTA

GCCTGGTGTGGTGGTGCATGCCTGTAATCCTAGCTACTTGAGAGGCTGAGACAGG
AAAATCACTTGAACCTCGGGAGGCGGATGTTGCAGCGAACTGAGATTGCGCCATT
GCACTCCAGCCTGGGCAACAAGATTGAAACTCTGTTTAAAAAAAAAAGTTTTTCAC
TAATGTGTACATTTTTTTTGTACTCTTTTATTCTCGAAAGGGAAGGAGGGCTATTGC
5 CCTATCCCTTATTAATAAATGCATTGTGGTTTCTGGTTTCTCTAATACCATATGCC
CTTCATTCAGTTTATAGTGGGCGGAAGTGGGGGAGAAAAAGTTGCTCAGAAATC
AAAAGATATCTCAAACAGCACAAATAATGGCTGATCGTTCTGCAAACAAAAAGT
TACATAATAGCTCAAGAAGGAGAAGTCAACATGACTCTGAACAAGCTTTAACTT
AGAAACTTTATCATCTTAAGGAAGAACGTGACCTTTGTCCAGGACGTCTCTGGTA
10 ATGGGGCACTTACACACACATGCACACGTACAAACCACAGGGAAAGGAGACCGC
CCTTCTGCCTCTGCTCGCGAGTATCACGCAGGCACCATGCACTATGTTTTACAC
ACACTGGGTGGAAGAAGAGCTTCAGCGCCAGTCTTCTAATGCTTTGGTGATAATG
AAAATCACTGGGTGCTTATGGGGTGTCAATTCAATCGAGTTAAAAGTTTTAATT
CAAAATGACAGTTTTTACTGAGGTTGATGTTCTCGTCTATGATATCTCTGCCCCTCC
15 CATAAAAATGGACATTTAAAAGCAACTTACCGCTCTTTAGATCACTCCTATATCA
CACACCACTTGGGGTGCTGTTTCTGCTAGACTTGTGATGACAGTGGCCTTAGGAT
CCCTGTTTGCTGTTCAAAGGGCAAATATTTTATAGCCTTTAAATATACCTAAACTA
AATACAGAATTAATATAACTAACAAACACCTGGTCTGAAATAACAAGGTGATCT
ACCCTGGAAGGAACCCAGCTGGTGGGCCAGGAGCGGTGGCTCACACCTGTAATT
20 CCAGCACTTTGGGAGGCTGAGACAGGAGGATCACTGGAGTCCAGGAGTTTGAGA
CCAGCCTGGGCAACATGGCAAAACCCAGTGTGCTTCTGTTGTCCCAGCTACACTA
CTCAGGAGGCTGAGGCAGGAGTATGACTTGAGCCTGGGAGGGGGAGGTTGCAGA
GAACTGATATTGCACCACCACTGCACTCCAGCCTGGGTGACACAGCAAAACCTT
ATCTCAAAAAAAAAAAAAAAAAAAAAAGGAACCCAGCTGGTTCCTGTAGGTGTGCA
25 ATAATAACAACCAGAGGAAGAAAAGGAAGACGATTTCCAGATGAAGAAGGGC
AGCTGGACCTTCGGAC

SEQ ID NO: 202

>gi|1049052|gb|U26644.1|HSU26644 Human fatty acid synthase (fas) mRNA, complete cds
30 ATGGAGGAGGTGGTGAATTGCCGGCATGTTTCGGGAAGCTGCCAGAGTCGGAGAAC
TTGCAGGAGTTCTGGGACAACCTCATCGGCGGTGTGGACATGGTCACGGACGAT
GACCGTCGCTGGAAGGCTGGGCTCTACGGCCTGCCCCGGCGGTCCGGCAAGCTG
AAGGACCTGTCTAGGTTTGATGCCTCCTTCTTCGGAGTCCACCCCAAGCAGGCAC
ACACGATGGACCCTCAGCTGCGGCTGCTGCTGGAAGCTACCTATGAAGCCATCGT
35 GGACGGAGGCATCAACCCAGATTCACTCCGAGGAACACACACTGGCGTCTGGGT
GGGCGTGAGCGGCTCTGAGACCTCGGAGGGCCCTGAGCCGAGACCCCGAGACACT
CGTGGGCTACAGCATGGTGGGCTGCCAGCGAGCGATGATGGCCAACCGGCTCTC
CTTCTTCTTCGACTTCAGAGGGCCCAGCATCGCACTGGACACAGCCTGCTCCTCC
AGCCTGATGGCCCTGCAGAACGCCTACCAGGCCATCCACAGCGGGCAGTGCCCT
40 GCCGCCATCGTGGGGGGCATCAACGTCTGCTGAAGCCCAACACCTCCGTGCAGT
TCTTGAGGCTGGGGATGCTCAGCCCCGAGGGCACCTGCAAGGCCTTCGACACAG
CGGGGAATGGGTACTGCCGCTCGGAGGGTGTGGTGGCTGTCCTGCTGACCAAGA
AGTCCCTGGCCCGGAAGGTCTACACCACCATCCTGAACAAAGGCACCAATACAG
ATGGCTTCAAGGAGCAAGGCGTGACCTTCCTCAGGATATCCAGGAGCAGCCTA
45 TCCGCTCGTTGTACCAAGTCGGCCGGAGTGGCCCTGAGTCATTTGAATACATCGA
AGCCACGGACCAGGCACCAAGGTGGGCGACCCCGAGGAGCGTAATGGCATCAC
CCGAGCCCTGTGCGCCACCCGCCAGGAGCCGCTGCTCATCGGCTCCACCAAGTCC
AACATGGGGCACCCGGAGCCAGCCTCGGGGCTCGACGCCCTGGCCAAGGTGCTG
CTGTCCCTGGAGCACGGGCTCTGGGCCCCCAACCTGCACTTCCATAGCCCCAACC

CTGAGATCCCAGCGCTGTTGGATGGGCGGCTGCAGGTGGTGGACCAGCCCCTGC
CCGTCCGTGGCGGCAACGTGGGCATCAACTCCTTTGGCTTCGGGGGCTCCAACAT
GCACATCATCCTGAGGCCCAACACGCAGTCCGCCCCCGCACCCGCCCCACATGCC
ACCTGCCCCGTCTGCTGCGGGCCAGCGGACGCACCCCTGAGGCCGTGCAGAAG
5 CTGCTGGAGCAGGGCCTCCGGCACAGCCAGGGCCTGGCTTTCCTGAGCATGCTGA
ACGACATCGCGGCTGTCCCCGCCACCGCCATGCCCTTCCGTGGCTACGCTGTGCT
GGGTGGTGAGACGCGGTGGCCAGAGTGCAGCAGGTGCCCCGCTGGCGAGCGCCC
GCTCTGGTTCATCTGCTCTGGGATGGGCACACAGTGGCGTGGAATGGGGCTGAGC
CTTATGCGCCTGGACCGCTTCCGAGATTCCATCCTACGCTCCGATGAGGCTGTGA
10 ACCGATTCGGCCTGAAGGTGTACAGCTGCTGCTGAGCACAGACGAGAGCACCT
TTGATGACATCGTCCATTTCGTTTGTGAGCCTGACTGCCATCCAGATAGGCCTCAT
AGACCTGCTGAGCTGCATGGGACCTGAGGCAGATGGCATCGTCGGCCACTCCCT
GGGGGAGTGGCTGTGCGGTACGCGACGGCTGCCTGTCCCAGGAGGAGGCCGTCT
CGCTGCCTACTGGAGGGGACAGTGCATCAAAGAAGCCCCACTTCCCGCCGGCGC
15 CATGGCAGCCGTGGGCTTGTCTTGGGAGGAGTGTAACAGCGCTGCCCCCTGC
GGTGGTGCCCGCCTGCCACAACCTCCAAGGACACAGTCACCATCTCGGGACCTCA
GGCCCCGGTGTTTGAGTTTCGTGGAGCAGCTGAGGAAGGAGGGTGTGTTTGCCAA
GGAGGTGCGGACCGGCGGTATGGCCTTCCACTCCTACTTCATGGAGGCCATCGCA
CCCCACTGCTGCAGGAGCTCAAGAAGGTGATCCGGGAGCCGAAGCCACGTTCA
20 GCCCCGCTGGCTCAGCACCTCTATCCCCGAGGCCAGTGGCACAGCAGCCTGGCAC
GCACGTCTTCCGCCGAGTACAATGTCAACAACCTGGTGAGCCCTGTGCTGTTCCA
GGAGGCCCTGTGGCACGTGCCTGAGCACGCGGTGGTGCTGGAGATCGCCCCGAC
CCCGTGCCCTCAGGCTGTCTGAAGCGGGTCCGTAAAGCCGAGCTGCACCATCATC
CCCCGTATGAAGAAGGATCACAGGGACAACCTGGAGTTCTTCCTGGCCGGCATC
25 GGCAGGCTGCACCTCTCAGGCATCGACGCCAACCCCAATGCCTTGTTCCACCTG
TGGAGTCCCCAGCTCCCCGAGGAACCTCCCCTCATCTCCCCACTCATCAAGTGGGA
CCACAGCCTGGCCTGGGACGCGCCCGGCCGCGGAGGACTTCCCCAACGGTTCAGG
TTCCCCCTCAGCCACCATCTACACATGCACACCAAGCTCCGAGTCTCCTGACCGC
TACCTGGTGGACCACACCATCGACGGTCGCGTCCTCTTCCCCGCCACTGGCTACC
30 TGAGCATAGTGTGGAAGACGCTGGCCCGCGCCTGGGCTGGGCTCGAGCAGCTGC
CTGTGGTGTTTGAGGATGTGGTGCAGCACCAGGCCACCATCCTGCCCAAGACTGG
GACAGTGTCTTGGAGGTACGGCTCCTGGAGGCCACCGGTGCCTTCGAGGTGTCA
GAGAACGGCAACCTGGTAGTGAGTGGGAAGGTGTACCAGTGGGATGACCCTGAC
CCCAGGCTCTTCGACCACCCGGAAAGTCCCCACCCCAATTCCCCACGGAGTCCCC
35 TCTTCCTGGCCCAGGCAGAAAGTTTACAAGGAGCTGCGTCTGCGTGGCTACGACTA
CGGCCCTCATTTCCAGGGCATCCTGGAGGCCAGCCTGGAAGGTGACTCGGGGAG
GCTGCTGTGGAAGGATAACTGGGTGAGCTTCATGGACACCATGCTGCAGATGTCC
ATCCTGGGCTCGGCCAAGCACGGCCTGTACCTACCCACCCGTGTCACCGCCATCC
ACATCGACCCTGCCACCCACAGGCAGAAAGCTGTACACACTGCAGGACAAGGCCC
40 AAGTGGCTGACGTGGTGGTGAGCAGGTGGCCGAGGGTCACAGTGGCGGGAGGCG
TCCACATCTCCGGGCTCCACACTGAGTCGGCCCCGCGGCGGCACGAGGAGCAGC
AGGTGCCCATCCTGGAGAAGTTTGTCTTCACTCCCCACACGGAGGAGGGGTGCCT
GTCTGAGCACGCTGCCCTCGAGGAGGAGCTGCAACTGTGCAAGGGGCTGGTCA
GGCACTCGAGACCAAGGTGACCCAGCAGGGGCTGAAGATGGTGGTGCCGGACTG
45 GACGGGGGCCAGATCCCCCGGGACCCCTCACAGCAGGAACTGCCCCGGCTGTT
GTCGGCTGCCTGCAGGCTTCAGCTCAACGGGAACCTGCAGCTGGAGCTGGCGCA
GGTGCTGGCCAGGAGAGGCCCAAGCTGCCAGAGGACCTCTGCTCAGCGGCCT
CCTGGACTCCCCGGCACTCAAGGCCTGCCTGGACACTGCCGTGGAGAACATGCC
AGCCTGAAGATGAAGGTGGTGGAGGTGCTGGCCGGCCACGGTCACCTGTATTCC

CGCATCCCAGGCCTGCTCAGCCCCCATCCCCTGCTGCAGCTGAGCTACACGGCCA
CCGACCGCCACCCCCAGGCCCTGGAGGCTGCCAGGCCGAGCTGCAGCAGCACG
ACGTTGCCAGGGCCAGTGGGATCCCGCAGACCCTGCCCCAGCGCCCTGGGCA
GCGCGGACCTCCTGGTGTGCAACTGTGCTGTGGCTGCCCTCGGGGACCCGGCCTC
5 AGCTCTCAGCAACATGGTGGCTGCCCTGAGAGAAGGGGGGCTTTCTGCTCCTGCAC
ACACTGCTCCGGGGGACCCCTCGGGACATCGTGGCCTTCCTCACCTCCACTGAGC
CGCAGTATGGCCAGGGCATCCTGAGCCAGGACGCGTGGGAGAGCCTCTTCTCCA
GGGTGTGCTGCGCCTGGTGGGCCTGAAGAAGTCCTTCTACGGCGCCACGCTCTT
CCTGTGCCGCGGGCCACCCCGCAGGACAGCCCCATCTTCCTGCCGGTGGACGAT
10 ACCAGCTTCCGCTGGGTGGAGTCTCTGAAGGGCATCCTGGCTGACGAAGACTCTT
CCCGGCCTGTGTGGCTGAAGGCCATCAACTGTGCCACCTCGGGCGTGGTGGGCTT
GGTGAAGTGTCTCCGCCGAGAGCCCGGCGGAACCGTCCGGTGTGTGCTGCTCTCC
AACCTCAGCAGCACCTCCCACGTCCCGGAGGTGGACCCGGGCTCCGCAGAACTG
CAGAAGGTGTTGCAGGGAGACCTGGTGATGAACGTCTACCGCGACGGGGCCTGG
15 GGGGTTTTCCGCCACTTCCTGCTGGAGGACAAGCCTGAGGAGCCGACGGCACAT
GCCTTTGTGAGCACCTCACCCGGGGGGACCTGTCTTCCATCCGCTGGGTCTGCT
CCTCGCTGCGCCATGCCAGCCACCTGCCCTGGCGCCAGCTCTGCACGGTCTA
CTACGCCTCCCTCAACTTCCGCGACATCATGCTGGCCACTGGCAAGCTGTCCCCT
GATGCCATCCCAGGGAAGTGGACCTCCCAGGACAGCCTGCTAGGTATGGAGTTC
20 TCGGGCCGAGACGCCAGCGGCAAGCGTGTGATGGGACTGGTGCCTGCCAAGGGC
CTGGCCACCTCTGTCTGCTGTACCGGACTTCCTCTGGGATGTGCCTTCCAAGTGC
GACGCTGGAGGAGGCGGCCTCGGTGCCTGTCGTCTACAGCACGGCCTACTACGC
GCTGGTGGTGCCTGGGGGGGTGCGCCCCGGGGAGACGCTGCTCATCCACTCGGG
CTCGGGCGGCGTGGGCCAGGCCGCCATCGCCATCGCCCTCAGTCTGGGCTGCCGC
25 GTCTTCACCACCGTGGGGTTCGGCTGAGAAGCGGGCGTACCTCCAGGCCAGGTTCC
CCCAGCTCGACAGCACAGCTTCGCCAACTCCCGGGACACATCCTTCGAGCAGCA
TGTGCTGTGGCACACGGGCGGGAAGGGCGTTGACCTGGTCTTGAAGTCTTGGCG
GAAGAGAAGCTGCAGGCCAGCGTGAGGTGCTTCGGTACGCACGGTTCGCTTCCTG
GAAATTGGCAAATTCGACCTTTCTCAGAACCACCCGCTCGGCATGGCTATCTTCC
30 TGAAGAACGTGACATTCCACGGGGTCTACTGGATGCGTTCTTCAACGAGAGCA
GTGCTGACTGGCGGGAGGTGTGGGCGCTTGTGAGGCGCCATCCGGGATGGGG
TGGTACGGCCCCCTCAAGTGCACGGTGTTCATGGGGCCAGGTGGAGGACGCCTT
CCGCTACATGGCCCAAGGGAAGCACATTGGCAAAGTCGTCGTGACGGTGTTCG
GGAGGAGCCGGCAGTGTGAAGGGGGGCCAAACCCAAGCTGATGTCGGCCATCTC
35 CAAGACCTTCTGCCCCGGCCACAAGAGCTACATCATCGCTGGTGGTCTGGGTGGC
TTCGGCCTGGAGTTGGCGCAGTGGCTGATACAGCGTGGGGTGCAGAAGCTCGTG
TTGACTTCTCGCTCCGGGATCCGGACAGGCTACCAGGCCAAGCAGGTCCGCGCGT
GGAGGCGCCAGGGGCTACAGGTGCAGGTGTCCACCAGCAACATCAGCTCACTGG
AGGGGGCCCCGGGGCCTCATTGCCGAGGCGGCGCAGCTTGGGCCCCGTGGGGGGCG
40 TCTTCAACCTGGCCGTGGTCTTGAGAGATGGCTTGCTGGAGAACCAGACCCAGA
GTTCTTCCAGGACGTCTGCAAGCCCAAGTACAGCGGCACCCTGAACCTGGACAG
GGTGACCCGAGAGGCGTGCCCTGAGCTGGACTACTTTGTGGTCTTCTCCTCTGTG
AGCTGCGGGCGTGGCAATGCGGGACAGAGCAACTACGGCTTTGCCAATTCCGCC
ATGGAGCGTATCTGTGAGAAACGCCGGCACGAAGGCCTCCCAGGCCTGGCCGTG
45 CAGTGGGGCGCCATCGGCACCGTGGGCATTTTGGTGGAGACGATGAGCACCAAC
GACACGATCGTCAGTGGCACGCTGCCCACGCGCATTGGCGTCCTTGGCCTGGAGG
TGCTGGACCTCTTCCTGAACCAGCCCCACATGGTCCTGAGCAGCTTTGTGCTGGC
TGAGAAGGCTGCGGCCTATAGGGACAGGGACAGCCAGCGGGACCTGGTGGAGG
CCGTGGCACACATCCTGGGCATCCGCGACTTGGCTGCTGTCAACCTGGGCGGCTC

ACTGGCGGACCTGGGCTGGACTCGCTCATGAGCGCGCCGGTGCGCCAGACGCT
 GGAGCGTGAGCTCAACCTGGTGTCTGTCCTGCGCGAGGTGCGGCAACTCACGCT
 CCGGAAACTGCAGGAGCTGTCCTCAAAGGCGGATGAAGCCAGCGAGCTGGCATG
 CCCCACGCCCAAGGAGGATGGTCTGGCCCAGCAGCAGACTCAGCTGAACCTGCG
 5 CTCCCTGCTGGTGAAACCGGAGGGCCCCACCCTGATGCGGCTCAACTCCGTGCAG
 AGCTCGGAGCGGCCCCCTGTTCTTGGTGCACCCAATCGAGGCTACCACCGTGTTCC
 ACAGCCTCGGTCCCGGTCTCAGCATCCCCACCTATGGCCTGCAGTGCACCCCGGC
 TGCGCCCTTGACAGCATCCACAGCCTGGCTGCCTACTACATCGACTGCATCAGG
 CAGGTGCAGCCCGAGGGCCCCCTACCGCGTGGCCGGCTACTCCTACGGGGCCTGC
 10 GTGGCCTTTGAAATGTGCTCCCAGCTGCAGGCCAGCAGAGCCAGCCCCACCC
 ACAACAGCCTCTTCCTGTTTCGACGGCTCGCCACCTACGTACTGGCCTACACCCA
 GAGCTACCGGGCAAAGCTGACCCAGGCTGTAAGGCTGAGGCTGAGACGGAGGC
 CATATGCTTCTTCGTGCAGCAGTTCACGGACATGGAGCACAACAGGGTGCTGGA
 GCGCTGCTGCCGCTGAAGGGCCTAGAGGAGCGTGTGGCAGCCGCGCTGGACCT
 15 GATCATCAAGAGCCACCAGGGCCTGGACCGCCAGGAGCTGAGCTTTGCGGCCCCG
 GTCCTTCTACTACAGGCTGCGTGCCGCTGACCAGTATACACCCAAGGCCAAGTAC
 AGTGGCAACGTGATGCTACTGCGGGCCAAGACGGGTGGCCGCTACGGCGAGGAC
 CTGGGCGCGGACTACAACCTCTCCCAGGTATGCGACGGGAAAGTATCCGTCCAT
 ATCATCGAGGGTGACCAACCGCACGCTGCTGGAGGGCAGCGGCCTGGAGTCCATC
 20 ATCAGCATCATCCACAGCTCCCTGGCTGAGCCACGTGTGAGTCGGGAGGGCTAG

SEQ ID NO: 203

>gi|748131|gb|T98394.1|T98394 ye59f12.s1 Soares fetal liver spleen 1NFLS Homo sapiens
 cDNA: clone IMAGE:122063-3', mRNA sequence

25 ACTTTTATTGTATCCAGCACCTGTGATAGTTTCATGTCTCTCTAAAGGAGACAG
 GAAATTGGAGCATTGTGGGCCCCCTTTAAAAGAAAAGAGGAGTAGGTAGGCACAC
 CCAGGTGCTTCTAAAACAACCAAGCCCAAACCTGACATGCTCCTCCCCACAGTCA
 CCTTCATTGTCCCCTTTAAAAGTCTGGAACAGTATGTAGCAAAACAAATAAATTA
 CTTTTCATTTCAAAAGTAAGTCCAAAGGTTGAAGCTGCCTAGGCCAGGGGTTCTG
 30 GGACAGGGTGCTTCCAAAGGAAGTGAGGCTTTTCTTTTCAACTTCCTTAGGCTCT
 AGCCAGTAGGACCAGGAAACCCCTGCTTTTCCACATCAGGGNTTCCAGGATGGG
 NGTTTTAGGTTAGGACTTNGGGGGATCCCGTTNGCTT

SEQ ID NO: 204

35 >gi|476704|gb|L26336.1|HUMHSPA2A Homo sapiens heat shock protein (HSPA2) gene,
 complete cds

CCTCCACCTCCCGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGAG
 ACTACAGGCACGCGCCACCACGCCCAGCTAATTTTGTATCTTTAGTAGAGACGG
 GCTTTCACCATGTTGGCCAGGATGGTCTCGATGTCTTAACGTCGTGATCCGGCCG
 40 CCTCGGCCTCCCAAGTGCTGGGATTACAGGCGTTAGCCACTGCGCCCCGGCCCCAG
 CCAGGCAGTTTTAATCGAGCGCTCACAACCACTGAGACGCAGCGAAGCACCCAC
 CATAATATCCAGGAGGCCGACCGCCGGTTCAGACTTTTTCTTTTCTTAATCCCC
 GTCCAAGGGATCCGCCCTCACCCCCACCCAGCCACCCCAATTCCCTATTCCCT
 CCCCTTGGACGGCGCCGGGGAAAACAAGCTGCTCGAGCTTTATTTCTTCGGTGCA
 45 ACCAACTCAGAATGAATTCCTCCGCCCCCTGCGTGCTCAGTGAGTCGGCACCCCTAG
 CAGTGAACCTGCATTTAAAACCTCAGGAATTGAGCGAACTCTCCAGTGGCTCTCC
 TCACCGGGATCCCCTTCCACGCCTCCTCCCGTGCCGCGCCTCAGTCCGCACTGCT
 CATTGGCCGCGTGCTGCCAATCCGATGCACGTCGGCTAGGGCAAAGACCGCGA
 AAAAGCGCGTACACCTGGCTCTGGGAGCGCGCGCCTAACGCCAGCCAGCAGCAG

GAGGCGCGCGAGGCACCACGGCCTGGCGGGCCGAGAGTCAGGGAGGAACCTCATT
TACATAACGGCCGCCCTCTGTCTCCTGGCGGGGGCCGGAGTCCCGCCCCCTCGTC
CAACTTGAAATCTGTTGGGTACGGGGCCAGTCACTCCGACCTAGGCAAGCCTGTG
GTGGAGCTGGAAGAGTTTGTGAGGGCGGTCCCGGGAGCGGATTGGGTCTGGGAG
5 TTCCAGAGGCGGCTATAAGAACCGGGAACCTGGGCGCGGGGAGCTGAGTTGCTG
GTAGTGCCCGTGGTGCTTGGTTCGAGGTGGCCGTTAGTTGACTCCGCGGAGTTCA
TCTCCCTGGTTTTTCCCGTCCTAACGTCGCTCGCCTTTCAGTCAGGATGTCTGCCCCG
TGGCCCCGGCTATCGGCATCGACCTGGGCACCACCTATTCGTGCGTCGGGGTCTTC
CAACATGGCAAGGTGGAGATCATCGCCAACGACCAGGGCAATCGCACCACCCCC
10 AGCTACGTGGCCTTCACGGACACCGAGCGCCTCATCGGCGACGCCGCCAAGAAC
CAGGTGGCCATGAACCCACCAACACCATCTTCGACGCCAAGAGGCTGATTGGA
CGGAAATTCGAGGATGCCACAGTGCAGTCGGATATGAAACACTGGCCGTTCCGG
GTGGTGAGCGAGGGGAGGCAAGCCCAAAGTGCAAGTAGAGTACAAGGGGGAGAC
CAAGACCTTCTTCCAGAGGAGATATCCTCCATGGTCCTCACGAAGATGAAGGA
15 GATCGCGGAAGCCTACCTGGGGGGCAAGGTGCACAGCGCGGTGCATAACGGTCCC
GGCCTATTTCAACGACTCGCAGCGCCAGGCCACCAAGGACGCAGGCACCATCAC
GGGGCTCAATGTGCTGCGCATCATCAACGAGCCACGGCGGCGGCCATCGCCTA
CGGCCTGGACAAGAAGGGCTGCGCGGGCGGCGAGAAAGAACGTGCTCATCTTTGA
CCTGGGCGGTGGCACTTTCGACGTGTCCATCCTGACCATCGAGGATGGCATCTTC
20 GAGGTGAAGTCCACGGCCGGCGATACCCACCTGGGCGGTGAGGACTTCGACAAC
CGCATGGTGAGCCACCTGGCGGAGGAGTTCAAGCGCAAGCACAAGAAGGACATT
GGGCCCCAACAAGCGCGCCGTGAGGCGGCTGCGCACCGCTTGCGAGCGCGCCAAG
GGCACCTGAGCTCGTCCACGCAGGCGAGCATCGAGATCGACTCGCTCTACGAG
GGCGTGGACTTCTATACGTCCATCACGCGCGCCCGCTTCGAGGAGCTCAATGCCG
25 ACCTCTTTCGCGGGACCCTGGAGCCGGTGGAGAAGGCGCTGCGCGACGCCAAGC
TGGACAAGGGCCAGATCCAGGAGATCGTGCTGGTGGGCGGCTCCACTCGTATCC
CCAAGATCCAGAAGCTGCTGCAGGATTTCTTCAACGGCAAGGAGCTGAACAAGA
GCATCAACCCCGACGAGGCGGTGGCCTATGGCGCCGCGGTGCAGGCGGCCATCC
TCATCGGCGACAAATCAGAGAATGTGCAGGACCTGCTGCTACTCGACGTGACCC
30 CGTTGTCGCTGGGCATCGAGACAGCTGGCGGTGTCATGACCCCACTCATCAAGAG
GAACACCACGATCCCCACCAAGCAGACGCAGACCTTCACCACCTACTCGGACAA
CCAGAGCAGCGTACTGGTGCAGGTATACGAGGGCGAACGGGCCATGACCAAGGA
CAATAACCTGCTGGGCAAGTTCGACCTGACCGGGATTCCCCCTGCGCCTCGCGGG
GTCCCCCAAATCGAGGTTACCTTCGACATTGACGCCAATGGCATCCTTAACGTTA
35 CCGCCGCCGACAAGAGCACCGGTAAGGAAAACAAAATCACCATCACCAATGACA
AAGGTCGTCTGAGCAAGGACGACATTGACCGGATGGTGCAGGAGGCGGAGCGGT
ACAAATCGGAAGATGAGGCGAATCGCGACCGAGTCGCGGCCAAAAACGCCCTGG
AGTCCTATACCTACAACATCAAGCAGACGGTGGAAGACGAGAACTGAGGGGCA
AGATTAGCGAGCAGGACAAAAACAAGATCCTCGACAAGTGTCAGGAGGTGATCA
40 ACTGGCTCGACCGAAACCAGATGGCAGAGAAAGATGAGTATGAACACAAGCAG
AAAGAGCTCGAAAGAGTTTGCAACCCCATCATCAGCAAACCTTTACCAAGGTGGT
CCTGGCGGGCGGCAGCGGCGGCGGCGGTTCAGGAGCCTCCGGGGGACCCACCATC
GAAGAAGTGGAATAAGCTTGCACTCAAGTCAGCGTAAACCTCTTTGCCCTTCTCT
CTCTCTCTTTTTTTTTTTGTTTGTCTTTGAAATGTCCTTGTGCCAAGTACGAGATC
45 TATTGTTGGAAGTCTTTGGTATATGCAAATGAAAGGAGAGGTGCAACAACCTTAGT
TTAATTATAAAAGTTCCAAAGTTTGTTTTTTAAAAACATTATTCGAGGTTTCTCTT
TAATGCATTTTGCGTGTTTGCTGACTTGAGCATTTTTTGATTAGTTTCGTGCATGGAG
ATTTGTTTGAGATGAGAAACCTTAAGTTTGACACCTGTTCTGTAGAAGCTTGGA
AACAGTAAAATATATAGGAGCTTAAATTGTTTATTTTTATGTACTACTTTAAACT

AAACTGAACATTGCAGTAATGTTAAGGACAGGTATACTTTTTGCAAACAAATGCA
TAAATGCAAATGTAAAGTAA

SEQ ID NO: 205

5 >gi|483537|emb|Z29330.1|HSUCEH2 H.sapiens (23k/2) mRNA for ubiquitin-conjugating
enzyme UbcH2

CCGGGCCGTGACAGACGGCCGGCAGAGGAAGGGAGAGAGGGCGGCGGCGACACC
ATGTCATCTCCCAGTCCGGGCAAGAGGCGGATGGACACGGACGTGGTCAAGCTC
ATCGAGAGTAAACATGAGGTTACGATCCTGGGAGGACTTAATGAATTTGTAGTG
10 AAGTTTTATGGACCACAAGGAACACCATATGAAGGCGGAGTATGGAAAGTTAGA
GTGGACCTACCTGATAAATACCCTTTCAAATCTCCATCTATAGGATTCATGAATA
AAATTTTCCATCCCAACATTGATGAAGCGTCAGGAACTGTGTGTCTAGATGTAAT
TAATCAAACCTTGGACAGCTCTCTATGATCTTACCAATATATTTGAGTCCTTCCTGC
CTCAGTTATTGGCCTATCCTAACCCCATAGATCCTCTCAATGGTGACGCTGCAGC
15 CATGTACCTCCACCGACCAGAAGAATACAAGCAGAAAATTAAGAGTACATCCA
GAAATACGCCACGGAGGAGGCGCTGAAAGAACAGGAAGAGGGTACCGGGGACA
GCTCATCGGAGAGCTCTATGTCTGACTTTTCCGAAGATGAGGCCCAGGATATGGA
GTTGTAGTAGAAAAAGCACCTGCTTTTCAGAAAGACTATTATTTCTAACCATGA
GAAGCAGACTATAATATTCATATTTAAACAAAGCAATTTTTTTTATTACTAAACA
20 AGGTTTTTATGAATAATAGCATTGATATATATATATATATATACACCTTTAGATC
TTGATTTCTTGGTCATTTCTCAACCTGAGGTGCATAGCATATTCCCACATTCCATT
TGGTAGCAATATGCGGTCTGAATGCATGCATTCATGAGTCCATGTGGCCAAGTCA
GCCTGTGTGCTACTGAACTGTCGAAGGAAATAGCCGCTCTGATAGGTAGATGTGA
GTAAAAAGAACAGGAAAAAATTGCTTCTTTATTGGTTTCCAAAGAAACAAACC
25 AAACCAACCAGCTCTTGGATGTGAAGATAAAATAGTGCTTTTTTGAAATGGAGA
GGAAAAACTTGGGGAGGAAGAGGCCTGCTGTGGGGGCATCGGAGCCAGCCATGT
AAGAATCAGAGCTGCTCCTTCCTGTGAATCCTAGGTGGCCCTATGTCTTCTGTGG
AGTTACAGTATAAAGCAGGGAGCTAATTAAGAGTATTAAAACCTTAAAACCATTTT
TTGACTCTGATTTTAAGTACATTTTTATATGTCAGTTGCTGCCCTTCACACTACCA
30 GGCCCTGCAGCCACAGTGTTCTGTTGGAGAACTTGGGGAAGTGTTTTCTGAACC
AGTTCTTTTTCTTGGGGTAGAGCGTGAAATCCAGACCTGTTTTTGAAAGGACAGC
ACAGGAGGAGAAAAGTGAAGTGGGACGATGCTTCCTCTCATCCAAAACACATGCA
GAGTCACATCCTCATCCTAGTGTTTGGCAGTTTGAGACCGCTACCCTGAACTTAA
GAGCTTTAAATATGAGGGTTGTGTTTCTGGGGGGGTTATTTTTTTGGTGTGTGTGT
35 GTGTGTATTGTGCTTAGAAAGGTTGCAGATTTTCATCTTCACCTACC

SEQ ID NO: 206

>4694921H1

GAGCCTAAGTGGGAGCCAGACCACGCAGGAGCTGGAGAACGTGGGGCGCATTGT
40 CCAGGTGTTGAGGCTGCTCAGGGCTCTGCGCATGCTAAAGCTGGGCAGACATTCC
ACAGGATTACGCTCCGTTGGGATGACAATCACCCAGTGTTAC

SEQ ID NO: 207

45 >gi|1162368|gb|N39161.1|N39161 yv26a01.s1 Soares fetal liver spleen 1NFLS Homo
sapiens cDNA clone IMAGE:243816 3' similar to gb:M98399 PLATELET

GLYCOPROTEIN IV (HUMAN);, mRNA sequence

TTAAGGAAGAACATATTTTAATGGTTGAAACCTGTCTTTATGAGGCGATTATGAC
AGCAAAAAATATTATAATGAATAACAATGCATAGTCTACGCTTTGTAATATTTCA
TACAATAATTCCTTTATCATTTACATCTCTTAATGCTAGAAAAGCATTCTGAAGAT

GCCAAGCGTAAGTTGCAACTGAGTAAAAAAAAAAAAAGCAAAATTTACTCAATTT
 CCAGAAGAGGTGCAGAACAGAGAATGAAGGTCCTTAAAATATAAACCGCTAGTG
 TGCTAAAATGATGTCCATTTGCAGGATCAGTGGACAAAATATTTAAGCCCATAAA
 GAAAAGAGTTATACCTGCTGTATGAAGGTATTCCATAGAGAAATATGAGTCATA
 5 AGCCAATTATTTATAAATGGCCTTCCAAATATTTGGT

SEQ ID NO: 208

>gi|1469913|gb|U41070.1|HSU41070 Human P2 purinergic receptor mRNA, complete cds

GGCGGTGCTCTACGTCTTCACCGCTGGAGATCTGCTGCCCCGGGCAGGTCCCCGT
 10 TTCCTCACGCGGCTCTTCGAAGGCTCTGGGGAGGCCCGAGGGGGCGGCCGCTCTA
 GGGAAGGGACCATGGAGCTCCGAACCTACCCCTCAGCTGAAAGTGGTGGGGCAGG
 GCCGCGGCAATGGAGACCCGGGGGGTGGGATGGAGAAGGACGGTCCGGAATGG
 GACCTTTGACAGCAGACCCTACAACCTGCTGCCCTTCCCTGTCCCTTTCCACCCCC
 CACCCACCCTCCAGAGGTCTCCCGACGGCCATGAACACTACATCTTCTGCAGCA
 15 CCCCCCTCACTAGGTGTAGAGTTCATCTCTCTGCTGGCTATCATCCTGCTGTCAGT
 GGCGCTGGCTGTGGGGCTTCCCGGCAACAGCTTTGTGGTGTGGAGTATCCTGAAA
 AGGATGCAGAAGCGCTCTGTCACTGCCCTGATGGTGTGCTGAACCTGGCCCTGGCCG
 ACCTGGCCGTATTGCTCACTGCTCCCTTTTTCCTTCACTTCTGGCCCAAGGCACC
 TGGAGTTTGGACTGGCTGGTTGCCGCTGTGTCACTATGTCTGCGGAGTCAGCA
 20 TGTACGCCAGCGTCCTGCTTATCACGGCCATGAGTCTAGACCGCTCACTGGCGGT
 GGCCCGCCCTTTGTGTCCAGAAAGCTACGCACCAAGGCGATGGCCCGGCGGGT
 GCTGGCAGGCATCTGGGTGTTGTCTTTCTGCTGGCCACACCCGTCCTCGCGTAC
 CGCACAGTAGTGCCCTGGAAAACGAACATGAGCCTGTGCTTCCCGCGGTACCCC
 AGCGAAGGGCACCGGGCCTTCCATCTAATCTTCGAGGCTGTACGGGCTTCCTGC
 25 TGCCCTTCCTGGCTGTGGTGGCCAGCTACTCGGACATAGGGCGTCGGCTACAGGC
 CCGGCGCTTCCGCCGCAGCCGCCGCACCGGCCGCTGGTGGTGTCTATCATCCTG
 ACCTTCGCCGCTTCTGGCTGCCCTACCACGTGGTGAACCTGGCTGAGGCGGGCC
 GCGCGCTGGCCGGCCAGGCCGCCGGGTAGGGCTCGTGGGGAAGCGGCTGAGCC
 TGGCCCGCAACGTGCTCATCGTACTCGCCTTCTGAGCAGCAGCGTGAACCCCGT
 30 GCTGTACGCGTGCGCCGGCGGGCGCCTCGTGCCTCGGCGGGCGTGGGCTTCGTC
 GCCAAGCTGCTGGAGGGCACGGGCTCCGAGGCGTCCAGCACGCGCCGCGGGGGC
 AGCCTGGGCCAGACCGCTAGGAGCGGCCCGCCGCTCTGGAGCCCGGCCCTTCC
 GAGAGCCTCACTGCCTCCAGCCCTCTCAAGTTAAACGAACCTGAACCTAGGCCTGGT
 GGAAGGAGGCGCACTTTCCTCCTGGCAGAATGCTAGCTCTGAGCCAGTTCAGTAC
 35 CTGGAGGAGGAGCAGGGGCGTGGAGGGCGTGGAGGGCGTGGGAGCGTGGGAGG
 CGGGAGTGGAGTGAAGAAGAGGGGAGAGATGGAGCAAAGTGAGGGCCGAGTGA
 GAGCGTGCTCCAGCCTGGCTCCCACAGGCAGCTTTAACCATTAAAACTGAAGTCT
 GAAATTTGGTCAAAAAAAAAAAAAA

SEQ ID NO: 209

>gi|2196448|dbj|D89078.1|D89078 Homo sapiens mRNA for leukotriene b4 receptor,
 complete cds

GCCATTCTCTCACATCCCGTGCGGTCAGGAAGCCCTTCCTGAACTCTGACTTCAG
 TTCTTGCTGCGGTTTCTGCCATTTTTTTCATATCCTCTGACAGCTGCGAGGTCAT
 45 CTCTGCTCTGGCTTTTCTCCAAGCAGAACAAAGTGGGGGCTCTGGAAAGGTAAAGG
 GACCTCAGTGGCCACCATTAATTTGCATCTTTCCTGAGAAGTGAGAGTTGAAA
 GGGAAGCAGGAAGGCCCATGGTCAGATTGAAGGAAGGACTTTTATGTTTCTTTT
 TTTTTTTTTGAAATGGAGTCTCGCTCTGTCAATTCAGGCTGGAGTGCAGTGGTGC
 TCTCAGCTCACTGCAGCCTCCACTTCCTGGGTTCACATGATTCTCCTGCCTCAGCC

TCCCAAGTAGCTGAGACTACAGGCACATGCCACTACACCCAGCTAACTTTTGTAT
TTTGTAGTAGAGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACCTGCTAAC
ATCAAGTGATCTGCTCCCCCTCAGCCTCCCAAAGTGCTGGGATTACCGGTATGAAC
CACCACAACCTGCCAGGAATTTTTAGTTTTAGCTTTTGCAGGAGACTTCAAGGA
5 AAGGAGACATTCTCTGTCCAGGAAACGGGTAAAGGGGACCATTTCTGCATTGCTG
GTTTCCCCTCTTGGCAGGGTGGGCATGAGGCATCACTGTTCTGCTCCCTCACTCC
TGCTCCTCATGCTCAGCCTGCCAGCTCGGCCTCAACTTTGTGTGTCTAAAGTGGA
ACTGAATAGTAGCTGTGAGAAGATAGGAAAGAGGTAGTGCCAATCTCCTTGCCC
AGATCATAAATCCAGACTCAGCAGGGTAACCACATGGGCAAGCACAAGGTAGGT
10 GCTTGGGGAAAGGGGAAGTAATTGGCATTCTGTGTGATACCAAGGAGACCATT
GGATTTTGGCTTCTACCAAAGAGAATGGAGAATTGGTTGACCTAAATGGAACCA
GTCCCTTTAAGTAAGGGGAGGAAAGGGGGTGCTGGAAGATGGCCCTCTTCCCAC
CACCTAGATCATAGCTTGAAGTGAAGCCAAGGACAGAGTGCTGCCCCCTTCGGC
ATTTACTGATGTGCCCTCTTTAAATCATGATGTTATCTAACCCAAACCCAGACCC
15 AGGACCTAGTCACAGCTCCAACCTACACTTCCTATTAATCTTAAACAAAGCGAA
ACAAACACAAAAAGATATCAGCATTGTAGCCTCCAATCTGAGCCCATTTCCCTTC
TCTGGCTACCATACCTCCTTCTCCTATATGATACCATTCACTACTTTGTTCAATTA
TCCAGTCTAGACCTGCATCTTGAGGCCACACCCAGCCTTCTCACTCCCCACACCC
CTCTTTCCTCTCTCACTGCTCCTTCCTGGTCTCTTCTCATCTGGCCCCACCTCTAAG
20 GAGTCCTCCTGCCTTCTGGGTGCGCCTGGAAAACAGACTATCCCCCTCCTAGTG
AAGGGAGTGGGTAGGGGTTTCAGCCCCACCCTCAGGAAGATGCGTCTTCCCTGTC
CTCTGCTCTGTGGTACTTCCTCTCTGGCTGATTTAGCAAACAGCACCTAGACCTGG
GGCCAGGCCTTTGGCAGTGGGACAGATCCAGGGATAGGCTACAGCACCTGCCC
TGACCCTGGGATTGGCATCAGCTTCCAACCAGTTCCTGCCAAAGCTTGTAAGTCC
25 TCCCGACGGCCATGAACACTACATCTTCTGCAGCACCCCCCTCACTAGGTGTAGA
GTTTCATCTCTCTGCTGGCTATCATCCTGCTGTCAGTGGCGCTGGCTGTGGGGCTTC
CCGGCAACAGCTTTGTGGTGTGGAGTATCCTGAAAAGGATGCAGAAGCGCTCTG
TCACTGCCCTGATGGTGTGAACCTGGCCCTGGCCGACCTGGCCGTATTGCTCAC
TGCTCCCTTTTTCTTCACTTCCTGGCCCAAGGCACCTGGAGTTTTGGACTGGCTG
30 GTTGCCGCTGTGTCACTATGTCTGCGGAGTCAGCATGTACGCCAGCGTCCTGCT
TATCACGGCCATGAGTCTAGACCGCTCACTGGCGGTGGCCCGCCCCCTTTGTGTCC
CAGAAGCTACGCACCAAGGCGATGGCCCGGCGGGTGCTGGCAGGCATCTGGGTG
TTGTCTTTCTGCTGGCCACACCCGTCCTCGCGTACCGCACAGTAGTGCCCTGGA
AAACGAACATGAGCCTGTGCTTCCCGCGGTACCCAGCGAAGGGCACCGGGCCT
35 TCCATCTAATCTTCGAGGCTGTCACGGGCTTCCTGCTGCCCTTCCTGGCTGTGGTG
GCCAGCTACTCGGACATAGGGCGTCGGCTACAGGCCCGGCGCTTCGCGCCGACG
CGCCGACCGGGCCGCTGGTGGTGTGTCATCATCCTGACCTTCGCGCGCTTCTGGC
TGCCCTACCACGTGGTGAACCTGGCTGAGGCGGGCCGCGCGCTGGCCGGCCAGG
CCGCCGGGTAGGGCTCGTGGGGAAGCGGCTGAGCCTGGCCCGCAACGTGCTCA
40 TCGCACTCGCCTTCCTGAGCAGCAGCGTGAACCCCGTGCTGTACGCGTGCGCCGG
CGGCGGCCTGCTGCGCTCGGCGGGCGTGGGCTTCGTGCGCAAGCTGCTGGAGGG
CACGGGTTCCGAGGCGTCCAGCACGCGCCGCGGGGGCAGCCTGGGCCAGACCGC
TAGGAGCGGCCCCGCGCTCTGGAGCCCGGCCCTTCGAGAGCCTCACTGCCTCC
AGCCCTCTCAAGTTAAACGAACCTGAACCTAGGCCTGGTGGAAGGAGGCGCACTTT
45 CCTCCTGGCAGAATGCTAGCTCTGAGCCAGTTCAGTACCTGGAGGAGGAGCAGG
GGCGTGGAGGGCGTGGAGGGCGTGGGAGCGTGGGAGGCGGGAGTGGAGTGGAA
GAAGAGGGAGAGATGGAGCAAAGTGAGGGCCGAGTGAGAGCGTGCTCCAGCCT
GGCTCCCACAGGCAGCTTTAACCATTAAAACTGAAGTCTGAA

SEQ ID NO: 210

>gi|521217|gb|M27602.1|HUMTRPSGNB Human pancreatic trypsinogen (TRY2) mRNA,
complete cds

5 AACACCATGAATCTACTCCTGATCCTTACCTTTGTTGCAGCTGCTGTTGCTGCCCC
CTTTGATGATGATGACAAGATCGTTGGGGGCTACATCTGTGAGGAGAATTCTGTC
CCCTACCAGGTGTCCTTGAATTCTGGCTACCACTTCTGCGGTGGCTCCCTCATCAG
CGAACAGTGGGTGGTGTGAGCAGGTCACTGCTACAAGTCCCGCATCCAGGTGAG
ACTGGGAGAGCACAAACATCGAAGTCCTGGAGGGGAATGAACAGTTCATCAATGC
GGCCAAGATCATCCGCCACCCCAAATACAACAGCCGACTCTGGACAATGACAT
10 CCTGCTGATCAAGCTCTCCTCACCTGCCGTCATCAATTCCCGCGTGTCCGCCATCT
CTCTGCCCACTGCCCCCTCCAGCTGCTGGCACCGAGTCCCTCATCTCCGGCTGGGG
CAACACTCTGAGTTCTGGTGCCGACTACCCAGACGAGCTGCAGTGCCTGGATGCT
CCTGTGCTGAGCCAGGCTGAGTGTGAAGCCTCCTACCCTGGAAAGATTACCAACA
ACATGTTCTGTGTGGGCTTCCTCGAGGGAGGCAAGGATTCCTGCCAGGGTGATTC
15 TGGTGGCCCTGTGGTCTCCAATGGAGAGCTCCAAGGAATTGTCTCCTGGGGCTAT
GGCTGTGCCCAGAAGAACAGGCCTGGAGTCTACACCAAGGTCTACAACATATGTG
GACTGGATTAAGGACACCATAGCTGCCAACAGCTAAAGCCCCCAGTCCCTCTGC
AGTCTCTATACCAATAAAGTGACCCTGCTCTCAC

20 SEQ ID NO: 211

>gi|186262|gb|M24594.1|HUMII56KD Human interferon-inducible 56 Kd protein mRNA,
complete cds

CCAGATCTCAGAGGAGCCTGGCTAAGGAAAACCCTGCAGAACGGCTGCCTAATT
TACAGCAACCATGAGTACAAATGGTGATGATCATCAGGTCAAGGATAGTCTGGA
25 GCAATTGAGATGTCACCTTACATGGGAGTTATCCATTGATGACGATGAAATGCCT
GATTTAGAAAACAGAGTCTTGGATCAGATTGAATTCCTAGACACCAAATACAGT
GTGGGAATACACAACCTACTAGCCTATGTGAAACACCTGAAAGGCCAGAATGAG
GAAGCCCTGAAGAGCTTAAAAGAAGCTGAAAACCTTAATGCAGGAAGAACATGAC
AACCAAGCAAATGTGAGGAGTCTGGTGACCTGGGGCAACTTTGCCTGGATGTATT
30 ACCACATGGGCAGACTGGCAGAAGCCCAGACTTACCTGGACAAGGTGGAGAACA
TTTGCAAGAAGCTTTCAAATCCCTTCCGCTATAGAATGGAGTGTCCAGAAATAGA
CTGTGAGGAAGGATGGGCCTTGCTGAAGTGTGGAGGAAAGAATTATGAACGGGC
CAAGGCCTGCTTTGAAAAGGTGCTTGAAGTGGACCCTGAAAACCCTGAATCCAG
CGCTGGGTATGCGATCTCTGCCTATCGCCTGGATGGCTTTAAATTAGCCACAAAA
35 AATCACAAGCCATTTTCTTTGCTTCCCCTAAGGCAGGCTGTCCGCTTAAATCCAG
ACAATGGATATATTAAGGTTCTCCTTGCCCTGAAGCTTCAGGATGAAGGACAGGA
AGCTGAAGGAGAAAAGTACATTGAAGAAGCTCTAGCCAACATGTCCTCACAGAC
CTATGTCTTTCGATATGCAGCCAAGTTTTACCGAAGAAAAGGCTCTGTGGATAAA
GCTCTTGAGTTATTAATAAAAGGCCTTGACAGGAAACACCCACTTCTGTCTTACTGC
40 ATCACCAGATAGGGCTTTGCTACAAGGCACAAATGATCCAAATCAAGGAGGCTA
CAAAAGGGCAGCCTAGAGGGCAGAACAGAGAAAAGCTAGACAAAATGATAAGA
TCAGCCATATTTCAATTTGAATCTGCAGTGGAAGAAAAGCCACATTTGAGGTGG
CTCATCTAGACCTGGCAAGAATGTATATAGAAGCAGGCAATCACAGAAAAGCTG
AAGAGAATTTTCAAAAATTGTTATGCATGAAACCAGTGGTAGAAGAAACAATGC
45 AAGACATACATTTCTACTATGGTCGGTTTCAGGAATTTCAAAAAGAAATCTGACGT
CAATGCAATTATCCATTATTTAAAAGCTATAAAAATAGAACAGGCATCATTAACA
AGGGATAAAAGTATCAATTCTTTGAAGAAATTGGTTTTAAGGAACTTCGGAGA
AAGGCATTAGATCTGGAAAGCTTGAGCCTCCTTGGGTTCGTCTATAAATTGGAAG
GAAATATGAATGAAGCCCTGGAGTACTATGAGCGGGCCCTGAGACTGGCTGCTG

ACTTTGAGAACTCTGTGAGACAAGGTCCTTAGGCACCCAGATATCAGCCACTTTC
ACATTTTCATTTTCATTTTATGCTAACATTTACTAATCATCTTTTCTGCTTACTGTTTT
CAGAAACATTATAATTCAGTGAATGATGTAATTCTTGAATAATAAATCTGACAA
AATATT

5

SEQ ID NO: 212

>1442951T6

AAGAGACATGAGACAACCACTGAGAACCAGCCACCCGGAGCTCAGTTTCTGCTA
CAGAGCACCTCCTCTTCAACGAATCACTGGATACCATTGGAGAGCAAGTCACTGT
10 TGTGTAAGCAGCAGAGCTGGAGGTGCTGTCAAGAGTCTCAGCAGACTCATTGGC
CAGATGCACCGAACTCAATGAGGCACTTAGAGATGAGAAACGATCTGTACTGGG
ATTTCCCAGCAGAAGAGACTTTGGTTTTTGTTCATCCTGAAGTTGCCACTCCACCA
CCAGTTTTATAGAGGGATATTCGCTTTTCACTGGTAGTTTATTCAGGTAGCTATAG
GTCTTGTCTTTTTGGATAGGGCAGTTAATTCCACTCTTACAACCATCAGGCTCAGG
15 AATGGGAAAGGGAACTGGGACGCCCATCAGGATGCCATGCACCACGGCCTTGCT
GCTTTTAGACTGAATATTGCTGGTGAAGGTGACATTGACGCTGTAAGACTGTCCT
TTGCTCAGCTGGCAGGGTTTGGTGGGGCATGGGGCTCACATTCACTTCCTTTATA
A

20 SEQ ID NO: 213

>gi|2216521|gb|AA486305.1|AA486305 ab35c01.r1 Stratagene HeLa cell s3 937216 Homo
sapiens cDNA clone IMAGE:842784 5' similar to gb:X60036 MITOCHONDRIAL

PHOSPHATE CARRIER PROTEIN PRECURSOR (HUMAN);, mRNA sequence

GTCTTAAGTTGTGGTCTGACACACACTGCTGTGGTTCCCCTGGATTTAGTGAAAT
25 GCCGTATGCAGGTGGACCCCCAAAAGTACAAGGGCATATTTAACGGATTCTCAG
TTACACTTAAAGAGGATGGTGTTCGTGGTTTGGCTAAAGGATGGGCTCCGACTTT
CCTTGGCTACTCCATGCAGGGACTCTGCAAGTTTGGCTTTTATGAAGTCTTTAAA
GTCTTGTATAGCAATATGCTTGGAGAGGAGAATACTTATCTCTGGCGCACATCAC
TATATTTGGCTGCCTCTGCCAGTGCTGAATTCTTTGCTGACATTGCCCTGGCTCCT
30 ATGGAAGCTGCTAAGGTTTCAATTCAAACCCAGCCAGGTTATGCCAACACTTTGA
GGGATGCAGCTCCCAAATGTATAAGGAAGAAGGCCTAAAAGCATTCTACAAGG
GGGTTGCTCCTCTCTGGATGAGACAGATAACATACACCATGATGAAGTTCGCCTG
CTTTG

35 SEQ ID NO: 214

>gi|186620|gb|M59373.1|HUMJTK2 Human tyrosine kinase (JTK2) mRNA, partial cds

ACCGGGACCTGGCTGCCCGCAATGTGCTGGTGACTGAGGACAATGTGATGAAGA
TTGCTGACTTTGGGCTGGCCCCGCGCGTCCACCACATTGACTACTATAAGAAAAC
CAGCAACGGCCGCCTGCCTGTGAAGTGGATGGCGCCCGAGGCCTTGTTTGACCG
40 GGTGTACACACACCAGAGTGACGTGTGGTCCTTT

SEQ ID NO: 215

>gi|1527336|gb|AA047666.1|AA047666 zf14b02.s1 Soares_fetal_heart_NbHH19W Homo
sapiens cDNA clone IMAGE:376875 3' similar to gb:M64082 DIMETHYLANILINE

45 MONOOXYGENASE (HUMAN);, mRNA sequence

ATAAGTAAAAGATCTCCTAAATGGAAGATGCACAGAGTAGATTTACAATGCTCC
AATTCCTCTCTTACAGCAATATTGCCTTCACAGTTATAAACTGTATTCAAATAGTA
AAGGTCACCCTCTCGCTTCCCTGGCTGGCCCCAGGGCTACCACTGGTATTCCTGA
GCCTCTCCAGCTCCACTTCTAATGCTAGAGAATGATAACTAAGATTCTGTGCA

TTTGAAGGTTGTTGGAAAGTTACAGGTTCAATTTAGAAAGAAANGCTGTTCTTGA
CAGCACTCCTGAGCCATCATACCTCTTTCCCATATAAACTATTTTCACAGATCTCA
ACTAAAACCCCTTNACTTTACAAAATGGATTGTGGTTGGTGCTGGAAATGGTGC

5 SEQ ID NO: 216

>gi|2218571|gb|AA488969.1|AA488969 aa55h08.r1 NCI_CGAP_GCB1 Homo sapiens
cDNA clone IMAGE:824895 5', mRNA sequence

GACTACAACGTGGCCCTTCAGAGATCGCGGATGGTCGCACGATCCTCCGACACA
GCTGGGCCCTTCATCCGTACAGCAGCCACATGGGCATCCCACCAGCAGCAGGCCT
10 GTGAACAAACCTCAGTGGCATAAACCGAACGAGTCTGACCCGCGCCTCGCCCCCTT
ATCAGTCCCAAGGGTTTTCCACCGAGGAGGATGAAGATGAACAAGTTTCTGCTGT
TTGAGGCACAGACTTTTCTGGAAGCAGAGCGNGCCACCTGAAAGGAGAGCACAA
GAAGACGTCTGAGCATTGGAGCCTTGGAATCACAATTCTGAGGACGGTGGACC
AGTTTGCCTCCTTCCCTGCCTTAAAAGCAGCATGGGGCTTCTTCTCCCTTCTTCC
15 TTTCCCTTTTGCATGTGAAATACTGTGAAGAAATTGCCCTGGCACTTTTCAGACTT
TGTTGCTTGAATGCACAGTGCAGCAATCTTCGAGCT

SEQ ID NO: 217

>gi|588224|gb|I09069.1| Sequence 5 from Patent WO 8809376

20 GTCCCGAGCGCGAGCGGAGACGATGCAGCGGAGACTGGTTCAGCAGTGGAGCGT
CGCGGTGTTCTGCTGAGCTACGCGGTGCCCTCCTGCGGGCGCTCGGTGGAGGGT
CTCAGCCGCCGCTCAAAAGAGCTGTGTCTGAACATCAGCTCCTCCATGACAAGG
GGAAGTCCATCCAAGATTTACGGCGACGATCTTCTTCCCTTACCATTCTGATCGCAGA
AATCEACACAGCTGAAATCAGAGCTACCTCGGAGGTGTCCCCTAACTCCAAGCCC
25 TCTCCCAACACAAAGAACCACCCCGTCCGATTTGGGTCTGATGATGAGGGCAGAT
ACCTAACTCAGGAACTAACAAGGTGGAGACGTACAAAGAGCAGCCGCTCAAGA
CACCTGGGAAGAAAAAGAAAGGCAAGCCCGGGAAACGCAAGGAGCAGGAAAAG
AAAAAACGGCGAACTCGCTCTGCCTGGTTAGACTCTGGAGTGACTGGGAGTGGG
CTAGAAGGGGACCACCTGTCTGACACCTCCACAACGTCGCTGGAGCTCGATTAC
30 GGAGGCATTGAAATTTTCAGCAGAGACCTTCCAAGGACATATTGCAGGATTCTGT
AATAGTGAACATATGGAAAGTATTAGAAATATTTATTGTCTGTAAATACTGTAAA
TGCATTGGAATAAACTGTCTCCCCCATTTGCTCTATGAACTGCACATTGGTTCAT
TGTGAATATTTTTTTTTTTTGCCAAGGCTAATCCAATTATTATTATCACATTTACCA
TAATTTATTTTGTCCATTGATGTATTTATTTGTAAATGTATCTTGGTGCTGCTGA
35 ATTTCTATATTTTTTGTAAACATAATGCACCTTAGATATACATATCAAGTATGTTGA
TAAATGACACAATGAAGTGTCTCTATTTTGTGGTTGATTTTAATGAATGCCTAAA
TATAATTATCCAAATTGATTTTCTTTCGTGCATGTAAAAATAACAGTATTTTAAAT
TTGTAAAGAATGTCTAATAAAATATAATCTAATTAC

40 SEQ ID NO: 218

>gi|182891|gb|M63904.1|HUMGA16 Human G-alpha 16 protein mRNA, complete cds

TGTTCCCAGCACTCAAGCCTTGCCACCGCCGAGCCGGGCTTCCTGGGTGTTTCAG
GCAAGGAAGTCTAGGTCCCTGGGGGGTGACCCCAAGGAAAAGGCAGCCTCCCT
GCGCACCCGGTTGCCCGGAGCCCTCTCCAGGGCCGGCTGGGCTGGGGGTGCCCT
45 GGCCAGCAGGGGCCCGGGGGCGATGCCACCCGGTGCCGACTGAGGCCACCGCAC
CATGGCCCCGCTCGCTGACCTGGCGCTGCTGCCCTGGTGCCTGACGGAGGATGAG
AAGGCCGCCGCCGGGTGGACCAGGAGATCAACAGGATCCTCTTGGAGCAGAAG
AAGCAGGACCGCGGGGAGCTGAAGCTGCTGCTTTTGGGCCAGGCGAGAGCGGG
AAGAGCACCTTCATCAAGCAGATGCGGATCATCCACGGCGCCGGCTACTCGGAG

GAGGAGCGCAAGGGCTTCCGGCCCCCTGGTCTACCAGAACATCTTCGTGTCCATGC
 GGGCCATGATCGAGGCCATGGAGCGGCTGCAGATTCCATTACAGAGGCCCGAGA
 GCAAGCACCACGCTAGCCTGGTCATGAGCCAGGACCCCTATAAAGTGACCACGT
 TTGAGAAGCGCTACGCTGCGGCCATGCAGTGGCTGTGGAGGGATGCCGGCATCC
 5 GGGCCTGCTATGAGCGTCGGCGGGAATTCCACCTGCTCGATTACAGCCGTGTACTA
 CCTGTCCCACCTGGAGCGCATCACCGAGGAGGGCTACGTCCCCACAGCTCAGGA
 CGTGCTCCGCAGCCGCATGCCCCACCACTGGCATCAACGAGTACTGCTTCTCCGTG
 CAGAAAACCAACCTGCGGATCGTGGACGTCGGGGGCCAGAAGTCAGAGCGTAAG
 AAATGGATCCATTGTTTCGAGAACGTGATCGCCCTCATCTACCTGGCCTCACTGA
 10 GTGAATACGACCAGTGCCTGGAGGAGAACAACCAGGAGAACCGCATGAAGGAG
 AGCCTCGCATTGTTTGGGACTATCCTGGAACCTACCCTGGTTCAAAAGCACATCCG
 TCATCCTCTTTCTCAACAAAACCGACATCCTGGAGGAGAAAATCCCCACCTCCCA
 CCTGGCTACCTATTTCCCCAGTTTCCAGGGCCCTAAGCAGGATGCTGAGGCAGCC
 AAGAGGTTTCATCCTGGACATGTACACGAGGATGTACACCGGGTGCGTGGACGGC
 15 CCCGAGGGCAGCAAGAAGGGCGCACGATCCCGACGCCTTTTCAGCCACTACACA
 TGTGCCACAGACACACAGAACATCCGCAAGGTCTTCAAGGACGTGCGGGACTCG
 GTGCTCGCCCCGCTACCTGGACGAGATCAACCTGCTGTGACCCAGGCCCCACCTGG
 GGCAGGCGGCACCGGCGGGCGGGTGGGAGGTGGGAGTGGCTGCAGGGACCCTA
 GTGTCCTGGTCTATCTCTCCAGCCTCGGCCACACGCAAGGGAGTCGGGGGACGG
 20 CCCGCTGCTGGCCGCTCTCTTCTCTGCCTCTCACCAGGACAGCCGCCCCCAGGG
 TACTCCTGCCCTTGCTTGACTCAGTTTCCCTCCTTTGAAAGGGAAGGAGCAAAAC
 GGCCATTTGGGATGCCAGGGTGGATGAAAAGGTGAAGAAATCAGGGGATTGAGA
 CTGTTGGGTGGGTGGGCATCTCTCAGGAGCCCCATCTCCGGGCGTGTCACTCCTGG
 GCAGGGTTCTGGGACCCTCTGTGGGTGACGCACACCCTGGGATGGGGCTAGTAG
 25 AGCCTTCAGGCGCCTTCGGGCGTGGACTCTGGCGCACTCTAGTGGACAGGAGAA
 GGAACGCCTTCCAGGAACCTGTGGACTAGGGGTGCAGGGACTTCCCTTTGCAAG
 GGGTAACAGACCGCTGGAAAACACTGTCACTTTCAGAGCTCGGTGGCTCACAGC
 GTGTCCTGCCCCGGTTTGCAGGACGAGAGAAATCGCGGCCACAAGCATCCCCAT
 CCCTTGACAGGCTGGGGGCTGGGCATGCTGCATCTTAACCTTTTGTATTTATTCCT
 30 CACCTTCTGCAGGGCTCCGTGCGGGCTGAAATTAAAGATTTCTTAG

SEQ ID NO: 219

>gi|1056573|gb|H78484.1|H78484 yu12d08.r1 Soares fetal liver spleen 1NFLS Homo
 sapiens cDNA clone IMAGE:233583 5' similar to gb:X59770 INTERLEUKIN-1

35 RECEPTOR, TYPE II PRECURSOR (HUMAN);, mRNA sequence
 GGATGGGAGATACTGTTGTGGTCACCTCTGGAAAATACATTCTGCTACTCTTAAA
 AACTAGTGACGCTCATACAAATCAACAGAAAGAGCTTCTGAAGGAAGACTTTAA
 AGCTGCTTCTGCCACGTGCTGCTGGGTCTCAGTCCTCCACTTCCCGTGTCTCTGG
 AAGTTGTCAGGAGCAATGTTGCGCTTGACGTGTTGGTAATGGGAGTTTCTGCCT
 40 TCACCCTTCAGCCTGCGGCACACACAGGGGCTGCCAGAAGCTGCCGGTTTTCGTGG
 GAGGCATTACAAGCGGGAGTTTCAAGGCTGGAAGGGGAGCCTGTAGCCCTGAGGTG
 CCCCCAGGTGCCCTACTGGTTGTGGGGCCTCTGTTTACGCCCCCGCATCAACCTNA
 ACATGGGCATTAAAAATTGACTCTTNTTAGGGACGGTCCCAGGGAGTAAGAAGN
 AGACACGGATGTGGGTCCCAGGGACGGTTNCG
 45

SEQ ID NO: 220

>3386358H1

GCCGCGCTACCAGATTGCACCGGGGCTGATTTGGGGGCTGGGAATTTGCCATTCT
 GCTGTACAGACACTGATTTTTTTTTTCTTCTTTTTTAAAAAGCAAGATTTTAGGTGAT

GGGCAAGTCAGAAAGTCAGATGGATATAACTGATATCAACACTCCAAAGCCAAA
GAAGAAACAGCGATGGACTCCACTGGAGATCAGCCTCTCGGTCCTTGTCTGCTC
CTCACCATCATAGCTGTGACAATGATC

5 SEQ ID NO: 221

>gi|759483|gb|R07560.1|R07560 ye97g06.r1 Soares fetal liver spleen 1NFLS Homo sapiens
cDNA clone IMAGE:125722 5' similar to SP:DEOK_HUMAN P27707 DEOXYCYTIDINE
KINASE ;, mRNA sequence

ATGGCCGCGGCACNCTNCTTTCTAAGTCGGCTTCGAGCACCCCTTCAGTTCCATGG
10 CCAAGAGCCCACTCGAGGGCGTTTCCTCCTCCAGAGGCCTGCACGCGGGGCGNGG
CCCANANGGCTTCTCCATCGAAGGCAACATTGGCCTGCACTGCCCAAAGTCTTGG
AAACTTGCTGGATATGATGTACCGGGAGCCAGCACGATGGTCCTACACATTCCAG
ACATTTTCCTTTTGTAGCCGCTGAAAGTACAGCTGGGAGCCCTTCCCTGAGGAA
ACTCTTTACAGGGCCAGGGAAGCCAGTTACAGATCTTTTGAGGAGGTCTGTGTAA
15 CAGTGGACAGGGTTCCATTTTGTAGGGTTTGGATGGAACATTTC

SEQ ID NO: 222

>4730434H1

GCTGGGAGAAGCAGGAATCTGCGCTCGGGTTCCGCAGATGCAGAGGTTGAGGTG
20 GCTGCGGGACTGGAATCATCGGGCAGAGGTCTCACAGCAGCCAAGGAACCTGG
GGCCCGCTCCTCCCCCTCCAGGCCATGAGGATTCTGCAGTTAATACTGCTTGCT
CTGGCAACAGGGCTTGTAGGGGGAGAGACCAGGATCATCAAGGGGTTTCGAGTGC
AAGCCTCACTCCCAGCCCTGGCAGGCAGCCCTGTTCGAGAAGACGC

25 SEQ ID NO: 223

>gi|815554|gb|R53652.1|R53652 yg84c05.r1 Soares infant brain 1NIB Homo sapiens cDNA
clone IMAGE:40056 5' similar to SP:PGG2_RAT Q00657 CHONDROITIN SULFATE
PROTEOGLYCAN NG2 ;, mRNA sequence

AGGGCGAGGTGGTCTTTGCCTTCACCAACTTCTCCTCCTCTCATGACCACTTCAGA
30 GTCCTGGCACTGGCTAGGGGTGTCAATGCATCAGCCGTAGTGAACGTCAGTGTGA
GGGCTCTGCTGCATGTGTGGGCAGGTGGGCCATGGCCAGNGGTGCCACCCTGCG
CCTGGACCCCAACGTCCTAGATGCTGGCGAGCTGGCCAACCGCACAGGCAGTGT
GCCGCGCTTCCGCCTCCTGGAGGGACCCCGGCATGGCCCGNTGGTCCGCGTGCC
CGAGCCAGGACGGAGCCCGGGGGAAGCCAGCTGGTGGAGCAGTTCACTNAGCA
35 GGACCTTGAGGACGGGAGGCTNGGGCTGGAGGTGGGCAGGCCAGAGGGGAGGG
CCCCCGGCCGNCAGGTGNACAATTCTCAATTTNGAGCTTTTNGGGCAC

SEQ ID NO: 224

>gi|2051920|gb|AA398883.1|AA398883 zt64f10.s1 Soares_testis_NHT Homo sapiens cDNA
clone IMAGE:727147 3' similar to gb:S66896 SQUAMOUS CELL CARCINOMA
ANTIGEN (HUMAN);, mRNA sequence

TATGTCACTATTTTATTGATGATGTGTTTTATAGAATCACAAAATTTAGAAACATA
AGAAGGATTTAGGTATCACCTAAATTCAAAGAAATGTGTGTTTCTAGGTTGCTAA
ATTCAAAGAAAAAGTATGATTTGGTTTGGTTTCATTTAAAACAGGTCACAAACAGA
45 ATTATATTTCAAATTTAGAAGATACGGTATTAAGTGATTCATCTTATTTTGGACAT
TTTTCTCAAGGAGAATTTTCTGGAAGAAAAAGTACATTTATATGTGGGCTTAT
TAAGAGAAAGAGAGAAAGGCATGCTATTTTAATCATTAATTTCTTGATGATGAC
GATCATCATCAAGATGAGAAAGAAAAGAAATATGAGCCAAGAGAATCTGTTGTT
GCCAGCAATCAGTTTACCAGAACATCTGCAGGTGAACATTTTCAAATGGAGTGA

CAGACTAATTGCATCTACGGGGATGAGAATCTGCCATAGAGAGGATGCTGTGGG
CTTATTTTGCTTATGTAGATAGGAAGGGTGATACATGGA

SEQ ID NO: 225

5 >gi|2432448|gb|AA598776.1|AA598776 ae38a04.s1 Gessler Wilms tumor Homo sapiens
cDNA clone IMAGE:898062 3' similar to TR:G468032 G468032 P55CDC.; mRNA
sequence
AAAAAATAACATGAAGGGAGACATGACTTTATTAGAAAAATAAAAAACAAC
GAGGTGATGGGTTGGTCTTCAGCGGATCCTTGGTGGATGAGGCTGCTTTTGGCTG
10 CACTGGCCTTCTCCCGCTCCCGCCGCGCAGGGTCCAACCAAAACAGCGCCA
TAGCCTCAGGGTCTCATCTGCTGCTGCGGATGCCACTGTGGCCCCATCTGGGCTC
ATGGTCAGACTCAGGACCCGGGATGTGTGACCTTTGAGTTCAGCCACCTTGGCCA
TGGTTGGGTACTTCCAAATAACTAGCTGATTCTGTGCAAAGCCATGGCCTGAGAT
GAGCTCCTTGTAAGGGGGAGACCAGAGGATGGAGCACACCTGGGAATGGGCATC
15 CACGGCACTCAGACAGGCCCCAGAGCAAAAATTCCAGATGCGAATGTGTGCGATC
ACTGGTGCACCCTCCTGTGGCAAGGACATTTGA

SEQ ID NO: 226

20 >gi|2102846|gb|AA423867.1|AA423867 zv79f01.s1 Soares_total_fetus_Nb2HF8_9w Homo
sapiens cDNA clone IMAGE:759865 3', mRNA sequence
TTTTCATTTTTTTGAGTAATTTATTTAAATTTGTGAATCTAGAAAATGTGTGTTATA
TATTTATATACAGGGAATAACAAAAGTTAAGTGTTTAATTGGAAAGAAAACCTGT
GACTGATAATATGTTGTAATTACCATTTTATAATATTACTTTCCATTGCAATGACT
TAAAATGAAGAAATAAGAATAGGAATAATTATGCTAACAAATTCACCTTTGTTTTTC
25 TGTGCCACTAAATTTCTTTAGGATCAAGAACTCTTTCATATTCAGACATTAAACA
ATATTCAAATAATTTTATAAAAATAGACATACAAGTTTACTCATATTAATAAAAAACA
AGTTGATTTTCATTTCCCTGTA

SEQ ID NO: 227

30 >gi|3087789|emb|Y14734.1|HSY14734 Homo sapiens mRNA for cathepsin L2
CGGCTGTAATCTCAGAGGCTTGTTTTGCTGAGGGTGCCTGCGCACGTGCGACGGCT
GCTGGTTTTGAAACATGAATCTTTCGCTCGTCCTGGCTGCCTTTTGCTTGGGAATA
GCCTCCGCTGTTCCAAAATTTGACCAAAATTTGGATACAAAGTGGTACCAGTGGA
AGGCAACACACAGAAGATTATATGGCGCGAATGAAGAAGGATGGAGGAGAGCA
35 GTGTGGGAAAAGAATATGAAAATGATTGAACTGCACAATGGGGAATACAGCCAA
GGGAAACATGGCTTCACAATGGCCATGAATGCTTTTCCTGACATGACCAATGAAG
AATTCAGGCAGATGATGGGTTGCTTTGCAAACCAGAAATTCAGGAAGGGGAAAG
TGTTCCGTGAGCCTCTGTTTCTTGATCTTCCCAAATCTGTGGATTGGAGAAAGAA
AGGCTACGTGACGCCAGTGAAGAATCAGAAACAGTGTGGTTCTTGTTGGGCTTTT
40 AGTGCGACTGGTGCTCTTGAAGGACAGATGTTCCGGAAAACCTGGGAAAACCTTGCT
CACTGAGCGAGCAGAATCTGGTGGACTGTTTCGCGTCCTCAAGGCAATCAGGGCT
GCAATGGTGGCTTCATGGCTAGGGCCTTCCAGTATGTCAAGGAGAACGGAGGCC
TGGACTCTGAGGAATCCTATCCATATGTAGCAGTGGATGAAATCTGTAAGTACAG
ACCTGAGAATTCTGTTGCTAATGACACTGGCTTCACAGTGGTCGCACCTGGAAAG
45 GAGAAGGCCCTGATGAAAGCAGTCGCAACTGTGGGGCCCATCTCCGTTGCTATG
GATGCAGGCCATTCGTCCTTCCAGTTCTACAAATCAGGCATTTATTTGAACCAG
ACTGCAGCAGCAAAAACCTGGATCATGGTGTCTGGTGGTTGGCTACGGCTTTGA
AGGAGCAAATTCGAATAACAGCAAGTATTGGCTCGTCAAAAACAGCTGGGGTCC
AGAATGGGGCTCGAATGGCTATGTAAAAATAGCCAAAGACAAGAACAACCACTG

TGGAATCGCCACAGCAGCCAGCTACCCCAATGTGTGAGCTGATGGATGGTGAGG
AGGAAGGACTTAAGGACAGCATGTCTGGGGAAATTTTATCTTGAAACTGACCAA
ACGCTTATTGTGTAAGATAAACCAGTTGAATCATTGAGGATCCAAGTTGAGATTT
TAATTCTGTGACATTTTACAAGGGTAAAATGTTACCACTACTTTAATTATTGTTA
5 TACACAGCTTTATGATATCAAAGACTCATTGCTTAATTCTAAGACTTTTGAATTTT
CATTTTTTAAAAAGATGTACAAAACAGTTT

SEQ ID NO: 228

>gi|967948|gb|R93782.1|R93782 yq35f04.r1 Soares fetal liver spleen 1NFLS Homo sapiens

cDNA clone IMAGE:197791 5', mRNA sequence

10 TGGATTTGGATGCTGCAAAAACGAGACTAAAAAAGGCAAAAGCTGCAGAACTA
GAAATTCATCTGAACAGGAATTAAGAATAACTCAAAGTGAATTTGATCGTCAAG
CAGAGATTACCAGACTTCTGCTAGAGGGAATCAGCAGTACACATGCCCATCACCT
TCGCTGTCTGAATGACTTTGTAGAAGCCCAGATGACTTACTATGCACAGTGTTAC
15 CAGTATATGTTGGACCTCCAGAAACAACCTGGGAAGTTTTCCATCCAATTATCTTA
GTAACAACAATCAGACTTCTGTGACACCTGTACCATCAGTTTTACCAAATGCGAT
TGGTTCTTCTGCCATGGCTTTCAACAAGTGGCCTAGTAATCACCTCTCCTTCCAAC
CTCAGTGACCTTAAGGGAGTGTAGTGGGCAGCAGGAAAGGGCCGGGGTTCTCTT
ATGGATTTATGGATGGCAGCAAACAGTACTGGAATTATTCACCTTCTGGGCAGTTG
20 AGGGTGATCANTGTGTTTCAGTGTTGTTGGGATGGGATTCAGNTTGGCTAATTGGG
GGNAAGGGGGAACCNNGGAGGGCAAGGTGCCATTA

SEQ ID NO: 229

>2723646H1

25 GTTCCGCAGATGCAGAGGTTGAGGTGGCTGCGGGACTGGAAGTCATCGGGCAGA
GGTCTCACAGCAGCCAAGGAACCTGGGGCCCGCTCCTCCCCCTCCAGGCCATGA
GGATTCTGCAGTTAATCCTGCTTGCTCTGGCAACAGGGCTTGTAGGGGGAGAGAC
CAGGATCATCAAGGGGTTTCGAGTGCAAGCCTCACTCCCAGCCCTGGCAGGCAGC
CCTGTTTCGAGAAGACGCGGCTACTCTGT

SEQ ID NO: 230

>gi|1335871|gb|U46005.1|HSU46005 Human MDC15 mRNA, complete cds

ATGCGGCTGGCGCTGCTCTGGGGCCCTGGGGCTCCTGGGCGCGGGCAGCCCTCTGC
CTTCCTGGCCGCTCCCAAATATAGGTGGCACTGAGGAGCAGCAGGCAGAGTCAG
35 AGAAGGCCCCGAGGGAGCCCTTGGAGCCCCAGGTCCTTCAGGACGATCTCCCAA
TTAGCCTCAAAAAGGTGCTTCAGACCAGTCTGCCTGAGCCCCTGAGGATCAAGTT
GGAGCTGGACGGTGACAGTCATATCCTGGAGCTGCTACAGAATAGGGAGTTGGT
CCCAGGCCGCCCAACCCTGGTGTGGTACCAGCCCGATGGCACTCGGGTGGTCAGT
GAGGGACACACTTTGGGAGAACTGCTGCTACCAGGGAAGAGTGCGGGGATATGCA
40 GGCTCCTGGGTGTCCATCTGCACCTGCTCTGGGCTCAGAGGCTTGGTGGTCCTGA
CCCCAGAGAGAAGCTATACCCTGGAGCAGGGGCCTGGGGACCTTCAGGGTCCTC
CCATTATTTTCGGAATCCAAGATCTCCACCTGCCAGGCCACACCTGTGCCCTGAG
CTGGCGGGAATCTGTACACACTCAGACGCCACCAGAGCACCCCCTGGGACAGCG
CCACATTCGCCGGAGGCGGGATGTGGTAACAGAGACCAAGACTGTGGAGTTGGT
45 GATTGTGGCTGATCACTCGGAGGCCCAGAAATACCGGGACTTCCAGCACCTGCTA
AACCGCACACTGGAAGTGGCCCTCTTGCTGGACACATTCTTCCGGCCCCCTGAATG
TACGAGTGGCACTAGTGGGCCTGGAGGCCTGGACCCAGCGTGACCTGGTGGAGA
TCAGCCCAAACCCAGCTGTCACCCTCGAAAACCTTCTCCACTGGCGCAGGGCACA
TTTGCTGCCTCGATTGCCCCATGACAGTGCCAGCTGGTGACTGGTACTTCATTCT

CTGGGCCTACGGTGGGCATGGCCATTCAGAACTCCATCTGTTCTCCTGACTTCTC
 AGGAGGTGTGAACATGGACCACTCCACCAGCATCCTGGGAGTCGCCTCCTCCATA
 GCCCATGAGTTGGGCCACAGCCTGGGCCTGGACCATGATTTGCCTGGGAATAGCT
 GCCCCTGTCCAGGTCCAGCCCCAGCCAAGACCTGCATCATGGAGGCCTCCACAG
 5 ACTTCCTACCAGGCCTGAACTTCAGCAACTGCAGCCGACGGGGCCCTGGAGAAAG
 CCCTCCTGGATGGAATGGGCAGCTGCCTCTTCGAACGGCTGCCTAGCCTACCCCC
 TATGGCTGCTTTCTGCGGAAATATGTTTGTGGAGCCGGGCGAGCAGTGTGACTGT
 GGCTTCCTGGATGACTGCGTCGATCCCTGCTGTGATTCTTTGACCTGCCAGCTGA
 GGCCAGGTGCACAGTGTGCATCTGACGGACCCTGTTGTCAAAATTGCCAGCTGCG
 10 CCCGTCTGGCTGGCAGTGTGCTCCTACCAGAGGGGATTGTGACTTGCTGAATTC
 TGCCCAGGAGACAGCTCCCAGTGTCCCCCTGATGTCAGCCTAGGGGATGGCGAG
 CCCTGCGCTGGCGGGCAAGCTGTGTGCATGCACGGGCGTTGTGCCTCCTATGCCC
 AGCAGTGCCAGTCACTTTGGGGACCTGGAGCCCAGCCCCGCTGCGCCACTTTGCCT
 CCAGACCGCTAATACTCGGGGAAATGCTTTTGGGAGCTGTGGGCGCAACCCCAG
 15 TGGCAGTTATGTGTCCTGCACCCCTAGAGATGCCATTTGTGGGCAGCTCCAGTGC
 CAGACAGGTAGGACCCAGCCTCTGCTGGGCTCCATCCGGGATCTACTCTGGGAG
 ACAATAGATGTGAATGGGACTGAGCTGAACTGCAGCTGGGTGCACCTGGACCTG
 GGCAGTGATGTGGCCCAGCCCCCTCCTGACTCTGCCTGGCACAGCCTGTGGCCCTG
 GCCTGGTGTGTATAGACCATCGATGCCAGCGTGTGGATCTCCTGGGGGCACAGG
 20 AATGTCGAAGCAAATGCCATGGACATGGGGTCTGTGACAGCAACAGGCACTGCT
 ACTGTGAGGAGGGCTGGGCACCCCCTGACTGCACCACTCAGCTCAAAGCAACCA
 GCTCCCTGACCACAGGGGCTGCTCCTCAGCCTCCTGGTCTTATTGGTCTTGGTGATG
 CTTGGTGCCAGCTACTGGTACCGTGCCCGCCTGVAACAGCGACTCTGCCAGCTCA
 AGGGACCCACCTGCCAGTACAGGGCAGCCCAATCTGGTCCCTCTGAACGGCCAG
 25 GACCTCCGCAGAGGGCCCTGCTGGCACGAGGCACTAAGTCTCAGGGGGCCAGCCA
 AGCCCCCACCCECAAGGAAGCCACTGCCTGCCGACCCCCAGGGCCGGTGCCCAT
 CGGGTGACCTGCCCGGCCAGGGCCTGGAATCCCGCCCCCTAGTGGTACCCTCCAG
 ACCAGCGCCACCGCCTCCGACAGTGTCTCCTCGCTCTACCTCTGACCTCTCCGGAGG
 TTCCGCTGCCTCCAAGCCGGACTTAGGGCTTCAAGAGGCGGGCGTGCCCTCTGGA
 30 GTCCCCTACCATGACTGAAGGCGCCAGAGACTGGCGGTGTCTTAAGACTCCGGG
 CACCGCCACGCGCTGTCAAGCAACACTCTGCGGACCTGCCGGCGTAGTTGCAGC
 GGGGGCTTGGGGAGGGGCTGGGGGTTGGACGGGATTGAGGAAGGTCCGCACAG
 CCTGTCTCTGCTCAGTTGCAATAAACGTGACATCTTGGGAGCGTTAA

35 SEQ ID NO: 231

>gi|2207808|gb|AA479252.1|AA479252 zv17f03.r1 Soares_NhHMPu_S1 Homo sapiens

cDNA clone IMAGE:753917 5', mRNA sequence

AAGAAGTCCAGTGTGTCCAGTTAAAACAGAAATAAATTAACTCTTCATCAACA
 AAGACCTGTTTTTGTGACTGCCTTGAGTTTTATCAGAATTATTGGCCTAGTAATCC
 40 TTCAGAAACACCGTAATTCTAAATAAACCTCTTCCCATACACCTTTCCCCCATAA
 GATGTGTCTTCAACACTATAAAGCATTGTATTGTGATTTGATTAAGTATATATTT
 GGTGTTCTCAATGAAGAGCAAATTTAAATATTATGTGCATTTGTAAATACAGTA
 GCTATAAAATTTTCCATACTTCTAATGGCAGAATACAGGAGGCCATATTAAATAA
 TACTGATGAAAGGCAGGACACTGCATTGTAAATAGGATTTTCTAGGCTCGGTAGG
 45 CAGAAAGAATTATTTTCTTTGAA

SEQ ID NO: 232

>gi|681270|gb|T70122.1|T70122 yc17c10.r1 Stratagene lung (#937210) Homo sapiens cDNA
 clone IMAGE:80946 5' similar to SP:MALK_ECOLI P02914

MALTOSE/MALTODEXTRIN TRANSPORT ATP-BINDING PROTEIN ;, mRNA
sequence

NTTATACTCACCCACAANTTTGTGACCCGANTGTAATGAAAGCCTCTGCAAATTG
AAAACATCATTGATCAAGAGGTGCAGACATTATCTGGTGGTGAACCTACAGCGAG
5 TAGCTTTAGCCCTTTGCTTGGGCAAACCTGCTGATGTCTATTTAATTGATGAACCA
TCTGCATATTTGGATTCTGAGCAAAGACTGATGGCAGCTCGAGTTGTCAAACGTT
TCATACTCCATGCAAAAAAGACAGCCTTTGTTGTGGAACATGACTTCATCATGGC
CACCTATCTAGCGGATCGGTNCATCGTTTTTGTATGGTGTTCATCTAAGGAACAC
AGTTGCAAACAGTCCTCAAACCCTTTTGGGCTGGGCTTGAATAAATTTTGGTCTT
10 CAGCTTGGAATTTACATTTACAGGAGNGTTCCAAACCAACTATTGGGCCACGGA
TTAAACAACTTATTTCAATTTAGGGTGTAGGNC

SEQ ID NO: 233

>3447387H2

15 TAATGTTTATGCAAAGTATTGATTCTGTTGTTGAATTTTGTAAACGAAAAAACCCA
TAAATCAAGAAGCTCCAAGCCTACAAAACATAAAGTGCAATTTTAGAAGTACAT
GGGAGGTGATTAGCAATTCTGAGGATTTTAAAAACACCATACCCATGGTGACAC
CACCTCCTCCACCTGTCTTCTCATTGCTGAAGATCAGTCAAAGAATTGTGTGCTTA
GTTCTTGATAAGTCTGGAAGCATGGGGGGTAAGGACCGCCTAAATCGAATGAAT
20 CAAGCA

SEQ ID NO: 234

>2863932H1

GGGGGCTGGGAATTTGCCATTCTGCTGTACAGACACTGATTTTTTTTCTTCTTT
25 TAAAAAGCAAGATTTTAGGTGATGGGCAAGTCAGAAAGTCAGATGGATATAACT
GATATCAACACTCCAAAGCCAAAGAAGAAACAGCGATGGACTCCACTGGAGATC
AGCCTCTCGGTCCTTGTCTGCTCCTCACCATCATAGCTGTGACAATGATCGCACT
CTATGCAACCTACGATGATGGTAATTGCAAGTCATCAGACTGCATAA

30 SEQ ID NO: 235

>5208013H1

GAAACGGATGACCAGGGCAAATACATGACCCTAGTTTTGTCCCGGATCGACCTA
GTGTTCAATTGTTCTGTTCACTGGAGAATTTGTGCTGAAGCTCGTCTCCCTCAGACA
CTACTACTTCACTATAGGCTGGAACATCTTTGACTTTGTGGTGGGGATTCTCTCCA
35 TTGTAGGTATGTTTCTGGCTGAGATGATAGAAAAGTATTTTGTGTCCCTACCTTG
GTCCGAGTGATCCGTCTTGCCA

SEQ ID NO: 236

>873192H1

40 CAGCGATGTCTNCACCACCGGTGCTGCAACCCCTGCTGNTGNTGNTGNCTCTGCT
GAATGTGGAGCCTTNCGGGGCCAAAATGATCCGCATCCCTNTTCATCGAGTCCAA
NCTGGANGCAGGATCCTGAANCTACTGAGGGGATGGAGAGAACCAGCAGAGCTC
CCCAAGTTGGGGGCCC

45 SEQ ID NO: 237

>gi|928147|gb|R83270.1|R83270 yp85c04.s1 Soares fetal liver spleen 1NFLS Homo sapiens
cDNA clone IMAGE:194214 3', mRNA sequence

NNNNNAGGGAAAAAAATGGAAAATTTATTAATTAGACAGTATGTGGGCATCCT
GTNCCACATGGGAATGAGAAGATGCTATAGGTNCTCTAAGTATTGCACAGTCTG

AAAAAATAACAAAAAAGGGAAGGGGAGGAAAAAATCACATGATATTGGG
 ANCCATCTCACATTATGANTANTCTACCAAGAAACATTTAAAAAAGAAANCCCTT
 TGTTTCTACAGTAGGCTTTAAGTTTATAGTTCTTGGGANTGACTGTATTCCATTGA
 AGGACATCTCAGGTAACAGGGAAGGCTGTTTTAGGCAATCCCCATGTGGCAAAT
 5 ATTAATAAAANATATATANTTTTTTGCCAATTCATCTCTNGCCTTCACCCCGGGCA
 ATCATGACATTTNCGAG

SEQ ID NO: 238

>gi|307424|gb|L12060.1|HUMRARG7A Homo sapiens retinoic acid receptor (gamma-7)

mRNA

CGGCAGAGTCAGTGTGCGGTTTGGGAGAAAATGTGTTCGGATATTTTGGGGCGGT
 CACGTGGGCGGGCGGGCTCCGAGAGGCCCGGGACAGTCCCAGCCTAGAGCCGT
 GGGGGGGCAGGAGCCCCCAGTACGGCGAGCCCCGGACATTGCGACGCTCCATC
 CAAGAGACTGCCCCGACGCCGGGACCTCGGGGCTCCGCCGCCTCCCTTCCCCCTCC
 15 CACTCCAGCAGCTACGGCCCAGTTCCTCAACCTGACCCAGTATGTAGAAGCCAG
 TCTCTGCAGGCGGCCAGCGGCGGTGGAGACACAGAGCACCAGCTCAGAGGAGAT
 GGTGCCAAGCTCGCCCTCGCCCCCTCCGCCTCCTCGGGTCTACAAGCCATGCTTC
 GTGTGCAATGACAAGTCCTCTGGCTACCACTATGGGGTCAGCTCTTGTGAAGGCT
 GCAAGGGCTTCTTTCGCCGAAGCATCCAGAAGAACATGGTGTACACGTGTCACC
 20 GCGACAAAACGTGTATCATCAACAAGGTGACCAGGAATCGCTGCCAGTACTGCC
 GGCTACAGAAGTGCTTCGAAGTGGGCATGTCCAAGGAAGCTGTGCGAAATGACC
 GGAACAAGAAGAAGAAAGAGGTGAAGGAAGAAGGGTCACCTGACAGCTATGAG
 CTGAGCCCTCAGTTAGAAGAGCTCATCACCAAGGTGAGCAAAGCCCATCAGGAG
 ACTTTCCCTCGCTCTGCCAGCTGGGCAAGTATACCACGAACTCCAGTGCAGACC
 25 ACCGCGTGCAGCTGGATCTGGGGCTGTGGGACAAGTTCAGTGAGCTGGCTACCA
 AGTGCATCATCAAGATCGTGGAGTTTGCCAAGCGGTTGCCTGGCTTTACAGGGCT
 CAGCATTGCTGACCAGATCACTCTGCTCAAAGCTGCCTGCCTAGATATCCTGATG
 CTGCGTATCTGCACAAGGTACACCCAGAGCAGGACACCATGACCTTCTCCGACG
 GGCTGACCCTGAACCGGACCCAGATGCACAATGCCGGCTTCGGGGCCCTCACAG
 30 ACCTTGTCTTTGCCTTTGCTGGGCAGCTCCTGCCCTGGAGATGGATGACACCGA
 GACAGGGCTGCTCAGCGCCATCTGCCTCATCTGCGGAGACCGCATGGACCTGGA
 GGAGCCCGAAAAAGTGGACAAGCTGCAGGAGCCACTGCTGGAAGCCCTGAGGCT
 GTACGCCCGGCGCGCGGCCAGCCAGCCCTACATGTTCCCAAGGATGCTAAT
 GAAAATCACCGACCTCCGGGGCATCAGCACTAAGGGAGCTGAAAGGGCCATTAC
 35 TCTGAAGATGGAGATTCCAGGCCCGATGCCTCCCTTAATCCGAGAGATGCTGGAG
 AACCTGAAATGTTTGAGGATGACTCCTCGCAGCCTGGTCCCCACCCCAATGCCT
 CTAGCGAGGATGAGGTTCTTGGGGGCCAGGGCAAAGGGGGCCTGAAGTCCCCAG
 CCTGACCAGGGGCCCTGACCTCCCCGCTGTGGGGGTTGGGGCTTCAGGCAGCAG
 ACTGACCATCTCCAGACCGCCAGTGACTGGGGGAGGACCTGCTCTGCCCTCTCC
 40 CCAACCCCTTCCAATGAGCG

SEQ ID NO: 239

>1909132F6

CGCCATCCCATCTCCAAAATCCTCAGTCCTGTGATGACCTTTCCTACTTTATAGG
 45 CCTAAGCATGCTGAGCGCCATCAGCACCGAGCGCTGCCTGTCCATCCTGTGGCCC
 ATCTGGTACCACTGCCGCCGCCAGATACTGTTCATCGGTTCATGTGTGCTCCTGC
 TCTGGGCCCTGTCCCTGCTGCGGAGTATCCTGGAGTGGATGTTCTGTGACTTCCTG
 TTTAGTGGTGTGATTCTGTTTGGTGTGAAACGTCAGATTTCAATTACAATCGCGTG
 GCTGGTTTTTTTATGTGTGGTTCTCTGTGGGTCCAGCCTGGTCCTACTGGTCAGGA

TTCTCTGTGGATCCCGGAAGATGCCGCTGACCAGGCTGTACGTGACCATCCTCCT
CACAGTGCTGGTCTTCCTCCTCTGTGGCCTGCCCTTTGGCATTTCAGTGGGCCCTGT
TTTCCAGGATCCACCTGGATTGGAAAGTCTTATTTTGTTCATGTGCATCTAGTTTCC
ATTTTCCTGTCCGCTCTTAACAGCAGTGCCAACCCCATCATTTACTTCTTCGTGGG
5 CTCCTTTAGGCAGCGTCAAAATAGGCAGAACCTGAAGCTGGTTCTCCAGAGGGCT
CTGCAGGACACGCCTGAGGTGGATGAAGGTGGAGGGTGGCTTCCTCAGGAAACC
CTGGAGCTGTTCGGGAAGCAGATTGGAGCAGTGAGGAAGAACCTCTGCCCTGTCA
GACAGGACTTTGAGAGCAATGCTGCCCTGNCACCTTGACAATTATATGC

10 SEQ ID NO: 240

>gi|1940577|gb|AA292583.1|AA292583 zt31e07.r1 Soares ovary tumor NbHOT Homo
sapiens cDNA clone IMAGE:723972 5' similar to TR:G562077 G562077 TATA-BINDING
PROTEIN ASSOCIATED FACTOR 30 KDA SUBUNIT. [1] ;, mRNA sequence
GCTGGAGCAGCTGCTGGGGGACCGGACCGTTGGCGGCGCGGGCCAGGGGAGCC
15 AGCTGAGCGGCGTGGGGCGGCTCCGGTGTTCGGCGGGTGGCGCGGCGCCCCCGGA
GGCANTGATCATAACGGGGTTTACGTACTGCCGAGCGCGGCCAACGGAGACGTG
AAGCCCGTGGTGTCCAGCACGCCTTTGGTGGACTTCTTGATGCAGCTGGAAGATT
ACACGCCTACGATCCCAGATGCAGTGACTGGTTACTACCTGAACCGTGCTGGCTT
TGAGGCCTCAGACCCACGCATAATTCGGCTCATCTCCTTAGCTGCCCAGAAATTC
20 ATCTCAGATATTGCCAATGATGCCCTACAGCACTGCAAAATGGAAGGGCA

SEQ ID NO: 241

>2581223T6
CCCACCAGGACCAAGGCCTTGAGAGCAGATTGGACCTATTGATTATGTGTATATA
25 AAAACAAGACATCTTTTAAAGCAAAGCTGGGCAAATCTCTATGGAAAGGGCG
CCACTGGCACTTGATTTTGACTTTCCAAAGTGCAGCAATGTGTTCCAGAACAGCT
CAAATCCTAAAAGGTGAAGTTCAAGTTCTTTGGTGGCCCAGTTGTCAAGCCACTT
AAATAGCAAATCCTGATGGCTTGAGGATTTCAATTTCTCCAGCCCAGAGCATATTA
GCATAAGAAGAGTACAAGTAATCAAGCATTCTACACGGTGTCCAGGTGAAAACC
30 ATACAATCAGCAATAGTGTGGTCAAGTTTCAGCCATGAATATGAACTATACAAG
ACATATTTTAAAGATAACTCAAAGTTGAATTGCATTACAGTAACTCAATGGGGTC
TTAAATTTTCTTAATCTTTAAGAAAATTTATAAAGGGCNAACNATAATAAAAATA
GTAATAATATTTGTTTTTAAAGTAGGNGTGAATGTTAAGAGNCATAAAGACTGC
TTATAG

35

SEQ ID NO: 242

>gi|728269|gb|T94781.1|T94781 ye33c06.s1 Stratagene lung (#937210) Homo sapiens cDNA
clone IMAGE:119530 3', mRNA sequence
ACAATTTGAATTATGAGAGTTCACCTTCAGACGAAGCACCTAACAGGAAATCTCT
40 CAAACACAGAAATGCTGGTTTAGCCACAAGATCAAAGGAAAAGATTGATTTTGT
ATGTCCGTGCAGTTTTTGGAGAGTGCCTCTACACATTTTCGTTTTTCACAGCAATCTT
TGTGTTTGAAGGGAGTTCTGATGTGGAAACAGCTTGCAGGGTTAAACCTGGATGG
CGCCCCTGTGATCAGACATTGCTCTGTTGTAATAAAAGTGTCTCAGTNCTCTTTC
CCNCTGATCCTCCTGCCTGTACTTCTCCTCGAGTTGCTGTTTCTCAGAATCTGCAC
45 AGTAAAATGTGCCAATCTGGGGCTTTNCCGAANCCGGTTCAAACCTGACTGAAATC

SEQ ID NO: 243

>gi|1220042|gb|N67917.1|N67917 yz52h03.s1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:286709 3' similar to gb:V01512_rna5 P55-C-FOS PROTO-ONCOGENE PROTEIN (HUMAN);, mRNA sequence

5 TTTTTTTCGCATTCAACTTAAATGCTTTTATTGACAATGTCTTGGAACAATAAGCA
AACAAATGCTTAAATTTTTTCATTCAAATTCACCTTTCCACATGTCAAAAGACCTCAA
GGTAGAAAAAATAAAAATAAAAATATAAATATCTGAGAATCCATCTTAATAAAT
AAATTAAAAACACAATAAAACGTTTTTCATGGAAAACCTGTTAATGTCAGAACATTC
10 AGACCACCTCAACAATGCATGATCAGTAACATTACAATGAACATTGATGTTGAA
GAAAAACTACAGTACATGGATATAGCTATTTATTTCTATCTACCAGAAAATAAAG
TCGTATCTTTTCTTAGTATAATATTGGGTCATTTCTAATCAGAACACACTATTGCC
AGGAACACAGTAGTTATTGTTAAAATCAGCCGCACTAGATACCATTGGAATAT
CCAGCACCAGGTTAATTCCCATAATGNACCCCATAGG

15 SEQ ID NO: 244

>gi|187354|gb|M69226.1|HUMMAOAAA Human monoamine oxidase (MAOA) mRNA, complete cds

GAATTCCTGACACGCTCCTGGGTCGTAGGCACAGGAGTGGGGGCCAAAGCATGG
AGAATCAAGAGAAGGCGAGTATCGCGGGCCACATGTTGACGTAGTCGTGATCG
20 GAGGTGGCATTTCAGGACTATCTGCTGCCAAACTCTTGACTGAATATGGCGTTAG
TGTTTTGGTTTTAGAAAGCTCGGGACAGGGTTGGAGGAAGAACATATACTATAAG
GAATGAGCATGTTGATTACGTAGATGTTGGTGGAGCTTATGTGGGACCAACCCAA
AACAGAATCTTACGCTTGTCTAAGGAGCTGGGCATAGAGACTTACAAAGTGAAT
GTCAGTGAGCGTCTCGTTCAATATGTCAAGGGGAAAACATATCCATTTCGGGGGCG
25 CCTTTCCACCAGTATGGAATCCCATTCGCATATTTGGATTACAATAATCTGTGGAG
GACAATAGATAACATGGGGAAGGAGATTCCAACCTGATGCACCCTGGGAGGCTCA
ACATGCTGACAAATGGGACAAAATGACCATGAAAGAGCTCATTGACAAAATCTG
CTGGACAAAGACTGCTAGGCGGTTTGCTTATCTTTTTGTGAATATCAATGTGACC
TCTGAGCCTCACGAAGTGTCTGCCCTGTGGTTCTTGTGGTATGTGAAGCAGTGCG
30 GGGGCACCACTCGGATATTCTCTGTCCACCAATGGTGGCCAGGAACGGAAGTTTGT
AGGTGGATCTGGTCAAGTGAGCGAACGGATAATGGACCTCCTCGGAGACCAAGT
GAAGCTGAACCATCCTGTCACTCACGTTGACCAGTCAAGTGACAACATCATCATA
GAGACGCTGAACCATGAACATTATGAGTGCAAATACGTAATTAATGCGATCCCTC
CGACCTTGACTGCCAAGATTCACTTCAGACCAGAGCTTCCAGCAGAGAGAAACC
35 AGTTAATTCAGCGTCTTCCAATGGGAGCTGTCATTAAGTGCATGATGTATTACAA
GGAGGCCTTCTGGAAGAAGAAGGATTACTGTGGCTGCATGATCATTGAAGATGA
AGATGCTCCAATTTCAATAACCTTGGATGACACCAAGCCAGATGGGTCACTGCCT
GCCATCATGGGCTTCATTCTTGCCCGGAAAGCTGATCGACTTGCTAAGCTACATA
AGGAAATAAGGAAGAAGAAAATCTGTGAGCTCTATGCCAAAGTGCTGGGATCCC
40 AAGAAGCTTTACATCCAGTGCATTATGAAGAGAAGAACTGGTGTGAGGAGCAGT
ACTCTGGGGGCTGCTACACGGCCTACTTCCCTCCTGGGATCATGACTCAATATGG
AAGGGTGATTCTGTCAACCCGTGGGCAGGATTTTCTTTGCGGGCACAGAGACTGCC
ACAAAGTGGAGCGGCTACATGGAAGGGGCGAGTTGAGGCTGGAGAACGAGCAGC
TAGGGAGGTCTTAAATGGTCTCGGGAAGGTGACCGAGAAAGACATCTGGGTACA
45 AGAACCTGAATCAAAGGACGTTCCAGCGGTAGAAATCACCCACACCTTCTGGGA
AAGGAACCTGCCCTCTGTTTCTGGCCTGCTGAAGATCATTGGATTTTCCACATCA
GTAACCTGCCCTGGGGTTTGTGCTGTACAAATACAAGCTCCTGCCACGGTCTTGAA
GTTCTGTTCTTATGCTCTCTGCTCACTGGTTTTCAATACCACCAAGAGGAAAATAT
TGACAAGTTTAAAGGCTGTGTCAATTGGGCCATGTTTAAGTGTACTGGATTTAACT

ACCTTTGGCTTAATTCCAATCATTGTTAAAGTAAAAACAATTCAAAGAATCACCT
AATTAATTTCAAGTAAGATCAAGCTCCATCTTATTTGTCAGTGTAGATCAACTCAT
GTTAATTGATAGAATAAAGCCTTGTGATCACTTTCTGAAATTCACAAAGTTAAAC
GTGATGTGCTCATCAGAAAC

5

SEQ ID NO: 245

>gi|1472327|gb|AA011215.1|AA011215 ze23f02.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:359835 3' similar to gb:M77693 DIAMINE

ACETYLTRANSFERASE (HUMAN);, mRNA sequence

10 TCCTCAGTAGTTTGAACACTTGCTGGCTATTTTTTCTGTCCAAGTTCTCAGTAACT
TCGGCCTGTGTAGTCAGTGGTTCTACACAGCCGACACTACTTCTTACATAACACT
TGGTCTCTCTGGCTTCTGGAAAGGGCGAGGGGTACCTTCCGGAGTCCAGTGCTC
TTTCGGCACTTCTGCAACCAGGCAGTGGTAAAAGGGGTGCTCTCCAAAACCATCT
TCTAGCAGATCTTTTTCAGTTAAGATTACTTGTTCTTCCATGTATTCATATTTAAG
15 CCAGCTCCTTGATCAGCCGCAGTATGTCAGTGCAGTCGGCGGCAGTGGCTGGGCG
GATCACCGAATTTAGCCATTTTCGGTCTTTTTTGCTTTTTTCTTCCCTTTGCGGGACC
AGGGCCCCCTGGTACTTGAACAGTAGGAGGAAGGTGGGTTCNCAATCGGTCTC
CCGGGGGANGCGGTN

20 SEQ ID NO: 246

>1693028H1

25 CACAGATGAAGGACGTGTTCTTCTTCCTCTTCTTCCTCGGCGTGTGGCTGGTAGCC
TATGGCGTGGCCACGGAGGGGCTCCTGAGGCCACGGGACAGTGA CTTC CCAAGT.
ATCCTGCGCCGCGTCTTCTA CCGTCCCTACCTGCAGATCTTCGGGCAGATTCCCCA
GGAGGACATGGACGTGGCCCTCATGGAGCACAGCAACTGCTCGT

SEQ ID NO: 247

>2519384H1

30 GGCAGCCTCGCCAGCGGGGGCCCCGGGCCTGGCCATGCCTCACTGAGCCAGCGC
CTGCGCCTCTACCTCGCCGACAGCTGGAACCAAGTGCACCTAGTGGCTCTCACCT
GCTTCCTCCTGGGCGTGGGCTGCCGGCTGACCCCGGGTTTGTACCACCTGGGCCG
CACTGTCCTCTGCATCGACTTCATGGTTTTACGGTGCGGCTGCTTCACATCTTCA
CGGTCAA

35 SEQ ID NO: 248

>gi|787364|gb|R31521.1|R31521 yh72b04.s1 Soares placenta Nb2HP Homo sapiens cDNA
clone IMAGE:135247 3', mRNA sequence

40 TTGGAGAATCAAATGGAAACACAGGGGGAAAGATATAGAGCTTCCGTCCACCAT
CTATGAAGCCCTCCACCTGCCTGACATCAAGTTTTTCCTAATGTGTATGCATTGC
TGAAGGTCCTGTGTATTCTTCCTGTGATGAAGGTTGAGAATGAGCGGTATGAAAA
TGGGACGAAAGCGTCTTTAAAGCATATTTGAGGGAACACTTTGACAGACCCAAA
GGTCAAGTACTTTGGCTTTTNCCTTTAACATAAATTTTNGATATTTAAA

SEO ID NO: 249

45 >gi|1110336|gb|H96850.1|H96850 yw03b12.s1 Soares melanocyte 2NbHM Homo sapiens
cDNA clone IMAGE:251135 3' similar to contains Alu repetitive element;; mRNA sequence
TTTTTGAGGGCAACATCTCGCTTTATTTTATTTATTTATTTATTTATTTATTTATTTG
AGACAGAGTCTTAACACTGTTGCCAGGCTGGAGTGCAATGGCGTGATCTCAGCT
CACTGCAAGCTCTGCCTCCTGGATTATGCCTTTCTCCTGCCTCAGCCTCCCGAGT

AGCTGGGACCACAGGTGCCCACCACCACGCCAGCTAATTTTTTGTACTTTTAGT
 AGAGACAGGGTTTTACCGTGTTAGCCAGGATAGTCTCGATCTCCTGACCTCGTGA
 GCCGCCCCGCTCGGNCTCCCAAAGTGCTGGGATTACAGGCATGAGCACCGTGCCCT
 5 GGCCACGTCCCTATTTTAGAAATGAGAGGAGTGACTGCACATAGGAAAAATGCC
 ACTTTTA

SEQ ID NO: 250

>gi|1177578|emb|X95383.1|OCCRYAB O.cuniculus mRNA for alpha-B-crystallin

CCGACACTCACCTAGCCACCATGGACATCGCTATCCACCACCCCTGGATCCGCCG
 10 CCCCTTCTTTCTTTTCACTCGCCAGCCGCCTCTTTGACCAGTTCTTCGGAGAGC
 ACCTGTTGGAGTCTGATCTCTTCCCAACTTCTACTTCCCTGAGCCCCTTCTATCTT
 CGGCCACCCTCATTCTGCGGGCACCCAGCTGGATTGACACTGGACTCTCAGAGA
 TGC GCCTGGAGAAGGACAGGTTCTCTGTCAACCTGGATGTGAAGCACTTCTCCCC
 AGAGGAGCTCAAGGTCAAAGTGTTGGGTGATGTGATTGAGGTGCACGGCAAACA
 15 TGAAGAGCGCCAGGATGAACATGGTTTCATCTCCAGGGAGTCCACAGGAAATA
 CCGGATCCCAGCTGATGTGGACCCTCTCACCATTACTTCATCCCTGTCATCTGATG
 GGGTCCTCACTGTGAATGGACCAAGGAAGCAAGCCCCTGGCCCAGAGCGCACCA
 TCCCCATAACCCGTGAAGAGAAGCCTGCTGTCACTGCAGCCCCCAAGAAGTAG

SEQ ID NO: 251

>gi|2167332|gb|AA453663.1|AA453663 aal8e04.r1 Soares_NhHMPu_S1 Homo sapiens

cDNA clone IMAGE:813630.5' similar to gb:M54915 PIM-1 PROTO-ONCOGENE.

SERINE/THREONINE-PROTEIN KINASE (HUMAN);, mRNA sequence.

AATTCGGCCCCGAGGGTCAGAACCCCTGCCATGGAAGTGTTCCTTCATCATGAGTT
 25 CTGCTGAATGCCGCGATGGGTGAGGTAGGGGGGAAACAGGTTGGGATGGGATAG
 GACTAGCACCATTTTAAGTCCCTGTCACCTCTTCCGACTCTTTCTGAGTGCCTTCT
 GTGGGGACTCCGGCTGTGCTGGGAGAAATACTTGAAGTTCCTCTTTTACCTGCT
 GCTTCTCCAAAAATCTGCCTTGGGTTTTGTTCCCTATTGTTGCTCTCGTGTCTTCCT
 TAACCCCTCCTTCATAATGAAGGGTGCATGGGAGA

SEQ ID NO: 252

>gi|2240364|gb|AA504204.1|AA504204 aa59h01.s1 NCI_CGAP_GCB1 Homo sapiens

cDNA clone IMAGE:825265 3', mRNA sequence

TTTTTTAACTCATGTGGTTAACATGGTATTGTATAAAAAGAAAAAAAAAACACCA
 35 CTCAATACTTACTAAGCCTTGCAGACAGCTCAGAGTTGAGGCAGCATATTGGGCA
 TAGAGATCATAGGATTTGTATTATCCCTTGAAGATGGAAGTCCAACCAACACCA
 GAATTTTCCAATTCAAATTCAGTTTTAGTCGAGACCCCAGCATAATTTTGTAGAAA
 AAAGATTGGATTGTTGCTTTTCTTTTAAATTTTCCATTCTATTAGACAAATGACC
 AGAGGCAATGACAAAAGTAACTGTTTAAAAGGGATTCTCTCCAGAAGTTTTTTC
 40 TAAAGGTTTAAAGTCCAGGCTTCCATCCTTCTCTCCATCCTTTTTCATTTTAAAAA
 GAAGGGTTTTGGAATATGTCAACCTTTACTCAGCTTGCTATACAAA

SEQ ID NO: 253

>gi|1203432|gb|N59542.1|N59542 yv76d05.s1 Soares fetal liver spleen 1NFLS Homo

sapiens cDNA clone IMAGE:248649 3', mRNA sequence

GTGATTGAACAGAGGCAGTGTACTGGAGTTTGGAACCAGAAAGATGAATTACCT
 45 ATTGAAGTGGACCTTGGTAAAAAGTGCTGGTATCACTCTATATTTGCCTGCCCA
 TTCTTCGTCAGCAAACAACAGATAACAATCCACCCATGAAATTGGTCTGTGGTCA
 TATTATATCAAGAGATGCCCTGAATAAAATGTTTAAATGGTAGCAAATTAAATGT

CCCTACTGTCCAATGGAACAAAGTCCAGGAGATGCCAAACAGATATTTTTCTGAA
GAGATAACTTTAGTTTGCAATTTGTAAGTGAACTGAATCGTGGGTGCATTTTCAG
AAGAGAACGTTCCATATAATGCAGCTAACCAAGGACTCCTGTGTTTCTATAAGCT
AATGCTCCAGAACTTTTGCCAACCTGTTAGTGTACACACACTGAGGGGAGTGCT
5 CCCGGTGAATATTATCATAGGGCCTTATT

SEQ ID NO: 254

>gi|2432801|gb|AA599176.1|AA599176 ae46c08.s1 Stratagene lung carcinoma 937218

Homo sapiens cDNA clone IMAGE:949934 3', mRNA sequence

10 TTGTAAAGAATTGAATTCCTTTATTTGTGATATCCATAAACGTTGCTATTCTCTATT
TCTATCCAGAAAGGCAATTTTCACCTATTATCACTTTTGTTCTTCTCTTATAACA
ACAACCTTGAATGCTATTGCAGGAAAGGGCTACAAATATACATTTGTAAACCAAGC
AGAATACACAGATATTTTGCTTTACAACCTGCACCTAAAATACCAGTATACGTAG
CTGGTTCATTAGTTGTCATAGCAATTTAGGGCTATTGCCAAGCTATGCATAGCAG
15 TTTACATTTTCAAACCTCATATAGAAAGGGCTATTGTGATATGAACTGGCAACTA
CATTCCTGTGAAGCCCATCTCAGTTACAAGCAAATGTGTAACTTCCAATTCTGC
AAAGAATTTTGATGGCAAACTTCCAAATCTGATGCAATTGTCTTAAGCAAGTTT
TTAAACAAATTGTTTCGCAGCTACTCTGCCATTCTGCCAGTAGATGGTGCT

20 SEQ ID NO: 255

>gi|659863|gb|T58002.1|T58002 yb19g05.r1 Stratagene fetal spleen (#937205) Homo sapiens

cDNA clone IMAGE:71672 5', similar to similar to gb:J04058 ELECTRON TRANSFER

FLAVOPROTEIN ALPHA-SUBUNIT (HUMAN), mRNA sequence

25 TGGTATCTGGTGGTGGAGGCTTGAAGAGTGGAGAGAACTTTAAGTTGTTATATGA
CTTGGCAGATCAACTACATGCTGCAGTTGGTGCTTCCCGTGCTGCTGTTGATGCT
GGCTTTGTTCCCAATGACATGCAAGTTGGACAGACGGGAAAAATAGTAGCACC
GAACTTTATATTGCTGTTGGAATATCTGGGAGCCATCCAACATTTAGCTGGGGAT
GAAAGACAGCAAGACAATTGTGGCCAATTAATAAAGACCCAGAAGCTCCCAATT
TTCCCAAGTNGCCAGATTATGGGATTAGTTGCAGGTTTATTTTAAGGTAGTTCCCT
30 GGAANTGACTTGAGGTATT

SEQ ID NO: 256

>gi|182666|gb|M76672.1|HUMFMLPX Human FMLP-related receptor II (FMLP R II)

mRNA, complete cds

35 ATGGAAACCAACTTCTCCACTCCTCTGAATGAATATGAAGAAGTGTCTATGAGT
CTGCTGGCTACACTGTTCTGCGGATCCTCCCATTTGGTGGTGCTTGGGGTCACCTTT
GTCCTCGGGGTCCTGGGCAATGGGCTTGTGATCTGGGTGGCTGGATTCCGGATGA
CACGCACAGTCACCACCATCTGTTACCTGAACCTGGCCCTGGCTGACTTTTCTTTC
ACGGCCACATTACCATTCTCATTGTCTCCATGGCCATGGGAGAAAAATGGCCTT
40 TTGGCTGGTTCCTGTGTAAGTTAATTCACATCGTGGTGGACATCAACCTCTTTGGA
AGTGTCTTCTTGATTGGTTTCATTGCACTGGACCGCTGCATTTGTGTCCTGCATCC
AGTCTGGGCCCAAGAACCCGCACTGTGAGTCTGGCCATGAAGGTGATCGTCGG
ACCTTGGATTCTTGCTCTAGTCCTTACCTTGCCAGTTTTCTCTTTTTGACTACAGT
AACTATTCCAAATGGGGACACATACTGTACTTTCAACTTTGCATCCTGGGGTGGC
45 ACCCCTGAGGAGAGGCTGAAGGTGGCCATTACCATGCTGACAGCCAGAGGGATT
ATCCGGTTTGTCAATTGGCTTTAGCTTGCCGATGTCCATTGTTGCCATCTGCTATGG
GCTCATTGCAGCCAAGATCCACAAAAAGGGCATGATTAAATCCAGCCGTCCCTTA
CGGGTCTCACTGCTGTGGTGGCTTCTTCTTCATCTGTTGGTTTCCCTTTCAACTG
GTTGCCCTTCTGGGCACCGTCTGGCTCAAAGAGATGTTGTTCTATGGCAAGTACA

AAATCATTGACATCCTGGTTAACCCAACGAGCTCCCTGGCCTTCTTCAACAGCTG
CCTCAACCCCATGCTTTACGTCTTTGTGGGCCAAGACTTCCGAGAGAGACTGATC
CACTCCCTGCCCACCACTGCTGGAGAGGGCCCTGTCTGAGGACTCAGCCCCAACTA
ATGACACGGCTGCCAATTGTGCTTCACCTCCTGCAGAGACTGAGTTACAGGCAAT
5 GTGAGG

SEQ ID NO: 257

>gi|1047029|gb|H73961.1|H73961 yu04e02.s1 Soares fetal liver spleen 1NFLS Homo
sapiens cDNA clone IMAGE:232826 3', mRNA sequence

10 TATGTTAGAAATTNCTTTATTATTACTTATCCTTATTAAGCGCCANNTTNAATGCT
GCAGAAAATTTCAAATCACCTTGATAACCCACTTNCTTTCCCTCCCAACCAATN
CTTGANCAAGAGTTTTTCAAGTAAAGACATGCTCTTCTCTCTCCTGTATAAACTT
TACGAAATAAAGGCCAAAAGATTGTGTACATCTTGCTGGGAAAATGCTGCCCCGGG
GCTCTGGGAGACGGTGGGCTGCCCGGGCTCCCTTCACTGTCCGGGTCTGAAAGG
15 ACTCTTGTTTCATGGAAGTGTCTCTTCAAAAGGCAAGGTCCACCACTTGCTGGGG
GTTTATCATTCTGAGGGGTCGGAAGAACTTTTCTCACAAGGTCTCAGGTCCAGTCT
CTTGGCCTTAGGCTGTTGTAAAAGGGGTTTTTCATCANTTCANCTTCCCTTTGTTTG
GAGGGTTGGGGATAANTGGGGTTAGGGGGGGNAACGGGGGTTTNGGGGGTTGG
GGGAATTAG
20

SEQ ID NO: 258

>gi|1477389|gb|L76631.1|HUMMGLUB Homo sapiens metabotropic glutamate receptor 1
beta (mGluR1beta) mRNA, complete cds

25 GCGCAGGTACTCAGGTATGTCTCAAGTCCATGTCCTCCAAACAGACTCAGCATCT
AGCTCACCGCTGCCAACACGACTTCCACTGTACTCTTGATCAATTTACCTTGATGC
ACTACCGGTGAAGAACGGGGACTCGAATTCCCTTACAAACGCCTCCAGCTTGATG
AGGCGGTCTGTGGAGGACCCAGAGGAGGAGACGAAGGGGAAGGAGGCGGTGGTG
GAGGAGGCAAAGGCCTTGGACGACCATTGTTGGCGAGGGGCACCACTCCGGGAG
AGGCGGCGCTGGGCGTCTTGGGGGTGCGCGCCGGGAGCCTGCAGCGGGACCAGC
30 GTGGGAACGCGGCTGGCAGGCTGTGGACCTCGTCCTCACCACCATGGTTCGGGCTC
CTTTTGTTTTTTTTCCCAGCGATCTTTTTGGAGGTGTCCCTTCTCCCCAGAAGCCCC
GGCAGGAAAGTGTTGCTGGCAGGAGCGTCGTCTCAGCGCTCGGTGGCCAGAATG
GACGGAGATGTCATCATTGGAGCCCTCTTCTCAGTCCATCACCAGCCTCCGGCCG
AGAAAGTGCCCGAGAGGAAGTGTGGGGAGATCAGGGAGCAGTATGGCATCCAG
35 AGGGTGGAGGCCATGTTCCACACGTTGGATAAGATCAACGCGGACCCGGTCTC
CTGCCCAACATCACCTTGGGCAGTGAGATCCGGGACTCCTGCTGGCACTCTTCCG
TGGCTCTGGAACAGAGCATTGAGTTCATTAGGGACTCTCTGATTTCATTTCGAGA
TGAGAAGGATGGGATCAACCGGTGTCTGCCTGACGGCCAGTCCCTCCCCCAGG
CAGGACTAAGAAGCCCATTGCGGGAGTGATCGGTCCCGGCTCCAGCTCTGTAGC
40 CATTCAAGTGCAAGCCTGCTCCAGCTCTTCGACATCCCCCAGATCGCTTATTCA
GCCACAAGCATCGACCTGAGTGACAAAACCTTTGTACAAATACTTCTGAGGGTTG
TCCCTTCTGACACTTTGCAGGCAAGGGCCATGCTTGACATAGTCAAACGTTACAA
TTGGACCTATGTCTCTGCAGTCCACACGGAAGGGAATTATGGGGAGAGCGGAAT
GGACGCTTTCAAAGAGCTGGCTGCCCAGGAAGGCCTCTGTATCGCCATTCTGAC
45 AAAATCTACAGCAACGCTGGGGAGAAGAGCTTTGACCGACTCTTGCGCAAATC
CGAGAGAGGCTTCCCAAGGCTAGAGTGGTGGTCTGCTTCTGTGAAGGCATGACA
GTGCGAGGACTCCTGAGCGCCATGCGGCGCCTTGGCGTCGTGGGCGAGTTCTCAC
TCATTGGAAGTGATGGATGGGCAGACAGAGATGAAGTCATTGAAGGTTATGAGG
TGGAAGCCAACGGGGGAATCACGATAAAGCTGCAGTCTCCAGAGGTCAGGTCAT

TTGATGATTATTTCTGAAACTGAGGCTGGACACTAACACGAGGAATCCCTGGTT
CCCTGAGTTCTGGCAACATCGGTTCCAGTGCCGCCTTCCAGGACACCTTCTGGAA
AATCCCAACTTTAAACGAATCTGCACAGGCAATGAAAGCTTAGAAGAAAATAT
GTCCAGGACAGTAAGATGGGGTTTGTTCATCAATGCCATCTATGCCATGGCACATG
5 GGCTGCAGAACATGCACCATGCCCTCTGCCCTGGCCACGTGGGCCTCTGCGATGC
CATGAAGCCCATCGACGGCAGCAAGCTGCTGGACTTCCTCATCAAGTCCTCATTC
ATTGGAGTATCTGGAGAGGAGGTGTGGTTTGATGAGAAAGGAGACGCTCCTGGA
AGGTATGATATCATGAATCTGCAGTACACTGAAGCTAATCGCTATGACTATGTGC
ACGTTGGAACCTGGCATGAAGGAGTGTGAACATTGATGATTACAAAATCCAGA
10 TGAACAAGAGTGGAGTGGTGCGGTCTGTGTGCAGTGAGCCTTGCTTAAAGGGCC
AGATTAAGGTTATACGGAAAGGAGAAGTGAGCTGCTGCTGGATTTGCACGGCCT
GCAAAGAGAATGAATATGTGCAAGATGAGTTCACCTGCAAAGCTTGTGACTTGG
GATGGTGGCCCAATGCAGATCTAACAGGCTGTGAGCCCATTCCTGTGCGCTATCT
TGAGTGGAGCAACATCGAATCCATTATAGCCATCGCCTTTTCATGCCTGGGAATC
15 CTTGTTACCTTGTTTGTACCCCTAATCTTTGTACTGTACCGGGACACACCAGTGGT
CAAATCCTCCAGTCGGGAGCTCTGCTACATCATCCTAGCTGGCATCTTCCTTGGTT
ATGTGTGCCCATTCACCTCTCATTGCCAAACCTACTACCACCTCCTGCTACCTCCAG
CGCCTCTTGGTTGGCCTCTCCTCTGCGATGTGCTACTCTGCTTTAGTGACTAAAAC
CAATCGTATTGCACGCATCCTGGCTGGCAGCAAGAAGAAGATCTGCACCCGGAA
20 GCCCAGGTTTCATGAGTGCCTGGGCTCAGGTGATCATTGCCTCAATTCTGATTAGT
GTGCAACTAACCTGGTGGTAACCCTGATCATCATGGAACCCCTATGCCCATTC
TGTCTACCCAAGTATCAAGGAAGTCTACCTTATCTGCAATACCAGCAACCTGGG
TGTGGTGGCCCTTTGGGCTACAATGGACTCCTCATCATGAGCTGTACCTACTAT
GCCTTCAAGACCCGCAACGTGCCCGCCAACTTCAACGAGGCCAAATATATCGCGT
25 TCACCATGTACACCACCTGTATCATCTGGCTAGCTTTTGTGCCCATTTACTTTGGG
AGCAACTACAAGATCATCACAACCTTGCTTTGCAGTGAGTCTCAGTGTAACAGTGG
CTCTGGGGTGCATGTTCACTCCCAAGATGTACATCATTATTGCCAAGCCTGAGAG
GAATGTCCGCAGTGCCCTTACCACCTCTGATGTTGTCCGCATGCATGTTGGCGAT
GGCAAGCTGCCCTGCCGCTCCAACACTTTCTCTAACATCTTCCGAAGAAAGAAGG
30 CAGGGGCAGGGAATGCCAAGAAGAGGCAGCCAGAATTCTCGCCCACCAGCCAAT
GTCCGTCGGCACATGTGCAGCTTTGAAAACCCCCACACTGCAGTGAATGTTTCTA
ATGGCAAGTCTGTGTCATGGTCTGAACCAGGTGGAGGACAGGTGCCCAAGGGAC
AGCATATGTGGCACCGCCTCTCTGTGCACGTGAAGACCAATGAGACGGCCTGCA
ACCAAACAGCCGTCATCAAACCCCTCACTAAAAGTTACCAAGGCTCTGGCAAGA
35 GCCTGACCTTTTC

SEQ ID NO: 259

>gi|1374674|gb|L78207.1|HUMSUR1RNA Homo sapiens sulfonylurea receptor (SUR1)
mRNA, complete cds

40 GCCAGCTGAGCCCGAGCCAGACCGCGCCCGCGCCGCGCCATGCCCTGGCCTTCTG
CGGCAGCGAGAACCACTCGGCCGCCTACCGGGTGGACCAGGGGGTCTCAACAA
CGGCTGCTTTGTGGACGTCTCAACGTGGTGGCGCACGTCTTCTACTCTTCATCA
CCTTCCCCATCCTCTTCATTGGATGGGGAAGTCAGAGCTCCAAGGTGCACATCCA
CCACAGCACATGGCTTCATTTCCCTGGGCACAACCTGCGGTGGATCCTGACCTTC
45 ATGCTGCTCTTCGTCTCTGGTGTGTGAGATTGCAGAGGGCATCCTGTCTGATGGGG
TGACCGAATCCCACCATCTGCACCTGTACATGCCAGCCGGGATGGCGTTCATGGC
TGCTGTCACCTCCGTGGTCTACTATCACAACATCGAGACTTCCAACCTCCCAAG
CTGCTAATTGCCCTGCTGGTGTATTGGACCCTGGCCTTCATACCAAGACCATCA
AGTTTGTCAAGTTCTTGGACCACGCCATCGCGTTCTCGCAGGTACGTTCTGCCTC

ACAGGGCTGCTGGTGATCCTCTATGGGATGCTGCTCCTCGTGGAGGTCAATGTCA
TCAGGGTGAGGAGATACATCTTCTTCAAGACACCGAGGGAGGTGAAGCCTCCCC
AGGACCTGCAAGACCTGGGGGTACGCTTCTGCAGCCCTTCGTGAATCTGCTGTC
CAAAGGCACCTACTGGTGGATGAACGCCTTCATCAAGACTGCCCCACAAGAAGCC
5 CATCGACTTGCGAGCCATCGGGAAGCTGCCCATCGCCATGAGGGCCCTCACCAA
CTACCAACGGCTCTGCGAGGCCTTTGACGCCCAGGTGCGGAAGGACATTCAGGG
CACTCAAGGTGCCCCGGGCCATCTGGCAGGCACTCAGCCATGCCTTCGGGAGGCG
CCTGGTCCTCAGCAGCACTTTCCGCATCTTGGCCGACCTGCTGGGCTTCGCCGGG
CCACTGTGCATCTTTGGGATCGTGGACCACCTTGGGAAGGAGAACGACGTCTTCC
10 AGCCCAAGACACAATTTCTCGGGGTTTACTTTGTCTCATCCCAAGAGTTCTTGGC
AATGCCTACGTCTTAGCTGTGCTTCTGTTCCCTTGCCCTCCTACTGCAAAGGACATT
TCTGCAAGCATCCTACTATGTGGCCATTGAAACTGGAATTA ACTTGAGAGGAGCA
ATACAGACCAAGATTTACAATAAAATTATGCACCTGTCCACCTCCAACCTGTCCA
TGGGAGAAATGACTGCTGGACAGATCTGTAATCTGGTTGCCATCGACACCAATCA
15 GCTCATGTGGTTTTTCTTCTTGTGCCCAAACCTCTGGGCTATGCCAGTACAGATCA
TTGTGGGTGTGATTCTCCTCTACTACATACTCGGAGTCAGTGCCTTAATTGGAGC
AGCTGTCATCATTCTACTGGCTCCTGTCCAGTACTTCGTGGCCACCAAGCTGTCTC
AGGCCCAGCGGACGACACTGGAGTATTCCAATGAGCGGCTGAAGCAGACCAACG
AGATGCTCCGCGGCATCAAGCTGCTGAAGCTGTACGCCTGGGAGAACATCTTCCG
20 CACGCGGGTGGAGACGACCCGCAGGAAGGAGATGACCAGCCTCAGGGCCTTTGC
CATCTATACCTCCATCTCCATTTTCATGAACACGGCCATCCCCATTGCAGCTGTCC
TCATAACTTTCTGTGGGCCATGTCAGCTTCTTCAAAGAGGGCCGACTTCTCGCCCTCC
GTGGGCTTTGCCTCCCTCTCCCTCTTCCATATCTTGGTCACACCGGTGTTCTCTGCT
GTCCAGTGTGGTCCGATCTACCGTCAAAGCTCTAGTGAGCGTGCAAAAGCTAAGC
25 GAGTTCCTGTCCAGTGCAGAGATCCGTGAGGAGCAGTGTGCCCCCATGAGCCC
ACACCTCAGGGCCCAGCCAGCAAGTACCAGGCGGTGCCCCCTCAGGGTTGTGAAC
CGCAAGCGTCCAGCCCGGGAGGATTGTGCGGGCCTCACCGGCCCACTGCAGAGC
CTGGTCCCCAGTGCAGATGGCGATGCTGACA ACTGCTGTGTCCAGATCATGGGAG
GCTACTTCACGTGGACCCAGATGGAATCCCCACACTGTCCAACATCACCATTTCG
30 TATCCCCCGAGGCCAGCTGACTATGATCGTGGGGCAGGTGGGCTGCGGCAAGTC
CTCGCTCCTTCTAGCCGCACTGGGGGAGATGCAGAAGGTCTCAGGGGCTGTCTTC
TGGAGCAGCCTTCTGACAGCGAGATAGGAGAGGACCCAGCCAGAGCGGGAG
ACAGCGACCGACTTGGATATCAGGAAGAGAGGCCCCGTGGCCTATGCTTCGCAG
AAACCATGGCTGCTAAATGCCACTGTGGAGGAGAACATCATCTTTGAGAGTCCCT
35 TCAACAAACAACGGTACAAGATGGTCATTGAAGCCTGCTCTCTGCAGCCAGACA
TCGACATCCTGCCCCATGGAGACCAGACCCAGATTGGGGAACGGGGCATCAACC
TGTCTGGTGGTCAACGCCAGCGAATCAGTGTGGCCCCGAGCCCTCTACCAGCACGC
CAACGTTGTCTTCTTGGATGACCCCTTCTCAGCTCTGGATATCCATCTGAGTGACC
ACTTAATGCAGGCCGGCATCCTTGAGCTGCTCCGGGACGACAAGAGGACAGTGG
40 TCTTAGTGACCCACAAGCTACAGTACCTGCCCCATGCAGACTGGATCATTGCCAT
GAAGGATGGCACCATCCAGAGGGAGGGTACCCTCAAGGACTTCCAGAGGTCTGA
ATGCCAGCTCTTTGAGCACTGGAAGACCCTCATGAACCGACAGGACCAAGAGCT
GGAGAAGGAGACTGTACAGAGAGAAAAGCCACAGAGCCACCCAGGGCCTAT
CTCGTGCCATGTCCTCGAGGGATGGCCTTCTGCAGGATGAGGAAGAGGAGGAAG
45 AGGAGGCAGCTGAGAGCGAGGAGGATGACAACCTGTCGTCCATGCTGCACCAGC
GTGCTGAGATCCCATGGCGAGCCTGCGCCAAGTACCTGTCCTCCGCCGGCATCCT
GCTCCTGTCGTTGCTGGTCTTCTCACAGCTGCTCAAGCACATGGTCCTGGTGGCC
ATCGACTACTGGCTGGCCAAGTGGACCGACAGCGCCCTGACCCTGACCCTTGCA
GCCAGGA ACTGCTCCCTCAGCCAGGAGTGCACCCTCGACCAGACTGTCTATGCCA

TGGTGTTCACGGCTGTCTGCAGCCTGGGCATTGTGCTGTGCCTCGTCACGTCTGTC
 ACTGTGGAGTGGACAGGGGCTGAAGGTGGCCAAGAGACTGCACCGCAGCCTGCTA
 AACCGGATCATCCTAGCCCCATGAGGTTTTTTGAGACCACGCCCTTGGGAGCA
 TCCTGAACAGATTTTTCATCTGACTGTAACACCATCGACCAGCACATCCCATCCAC
 5 GCTGGAGTGCCTGAGCCGCTCCACCCTGCTCTGTGTCTCAGCCCTGGCCGTCATC
 TCCTATGTCACACCTGTGTTCCCTCGTGGCCCTCTTGCCCCTGGCCATCGTGTGCTA
 CTTTCATCCAGAAGTACTTCCGGGTGGCGTCCAGGGACCTGCAGCAGCTGGATGAC
 ACCACCCAGCTTCCACTTCTCTCACACTTTGCCGAAACCGTAGAAGGACTCACCA
 CCATCCGGGGCCTTCAGGTATGAGGCCCGGTTCCAGCAGAAGCTTCTCGAATACAC
 10 AGACTCCAACAACATTGCTTCCCTCTTCCCTCACAGCTGCCAACAGATGGCTGGAA
 GTCCGAATGGAGTACATCGGTGCATGTGTGGTGGCTCATCGCAGCGGTGACCTCCA
 TCTCCAACCTCCCTGCACAGGGAGCTCTCTGCTGGCCTGGTGGGCCTGGGCCTTAC
 CTACGCCCTAATGGTCTCCAACCTCAACTGGATGGTGAGGAACCTGGCAGAC
 ATGGAGCTCCAGCTGGGGGCTGTGAAGCGCATCCATGGGCTCCTGAAAACCGAG
 15 GCAGAGAGCTACGAGGGACTCCTGGCACCATCGCTGATCCCAAAGAAGTGGCCA
 GACCAAGGGAAGATCCAGATCCAGAACCTGAGCGTGCCTACGACAGCTCCCTG
 AAGCCGGTGCTGAAGCACGTCAATGCCCTCATCTCCCCTGGACAGAAGATCGGG
 ATCTGCGGCCGCACCGGCAGTGGGAAGTCCCTCCTTCTCTCTTGCCTTCTTCCGCAT
 GGTGGACACGTTTGAAGGGCACATCATCATTGATGGCATTGACATCGCCAACT
 20 GCCGCTGCACACCCTGCGCTCACGCCTCTCCATCATCCTGCAGGACCCCGTCTC
 TTCAGCGGCACCATCCGATTTAACCTGGACCCTGAGAGGAAGTGCTCAGATAGC
 AACTGTGGGAGGGCCTTGAAATCGCCAGCTGAAGCTGGTGGTGAAGGCACTG
 CCAGGAGGCCTCGATGCCATCATEACAGAAGGCGGGGAGAATTTAGCCAGGGA
 CAGAGGCAGCTGTTCTGCCTGGCCCGGGCCTTCGTGAGGAAGACCAGCATCTTCA
 25 TCATGGACGAGGCCACGGCTTCCATTGACATGGCCACGGAAAACATCCTCCAAA
 AGGTGGTGATGACAGCCTTCGCAGACCGCACTGTGGTCACCATCGCGCATCGAGT
 GCACACCATCCTGAGTGCAGACCTGGTGATCGTCTGAAGCGGGGTGCCATCCTT
 GAGTTCGATAAGCCAGAGAAGCTGCTCAGCCGGAAGGACAGCGTCTTCGCCTCC
 TTCGTCCGTGCAGACAAGTGACCTGCCAGAGCCCAAGTGCCATCCCACATTGCGA
 30 CCTGCCCATACCCCTGCCTGGGTTTTCTAACTGTAAATCACTTGTAATAAATA
 GATTTGATTATTTCTCTAAA

SEQ ID NO: 260

>2211267F6

35 GAAAGAAACAGATAACACCAAACCAAACCCCGTAGCTCCATATTGGACATCCCC
 AGAAAAGATGGAAAAGAAATTGCATGCAGTGCCGGCTGCCAAGACAGTGAAGTT
 CAAATGCCCTTCCAGTGGGACCCCAAACCCACACTGCGCTGGTTGAAAAATGG
 CAAAGAATTCAAACCTGACCACAGAATTGGAGGCTACAAGGTCCGTTATGCCAC
 CTGGAGCATCATAATGGACTCTGTGGTGGCCTCTGACAAGGGCAACTACACCTGC
 40 ATTGTGGAGAATGAGTACGGCAGCATCAACCACACATAACCAGCTGGATGTCGTG
 GAGCGGTCCCCTCACCGGCCCATCCTGCAAGCAGGGTTGCCCGCCAACAAAACA
 GTGGCCTGGGTAGCAACGTGGAGTTCATGTGTAAGGTGTACAGTGACCCGCAGC
 CGCACATCCAGTGGCTAAAGCACATCGAGGTGAATGGGAGCAAGATTGGCCCAG
 ACAACCTGCTTATGTC

45

SEQ ID NO: 261

>gi|186287|gb|M54933.1|HUMIL1C Human monocyte interleukin mRNA, complete cds

GACAAACCTTTTCGAGGCAAAAGGCAAAAAAGGCTGCTCTGGGATTCTCTTCAG
 CCAATCTTCAATGCTCAAGTGTCTGAAGCAGCCATGGCAGAAGTACCTAAGCTCG

CCAGTGAAATGATGGCTTATTACAGTGGCAATGAGCATGACTTGTCTTTGAAGC
 TGATGGCCCTAAACAGATGAAGTGCTCCTTCCAGGACCTGGACCTCTGCCCTCTG
 GATGGCGGCATCCAGCTACGAATCTCCGACCACCTACAGCAAGGGCTTCAGG
 CAGGCCGCGTCAGTTGTTGTGGCCATGGACAAGCTGAGGAAGATGCTGGTTCCCT
 5 GCCCACAGACCTTCCAGGAGAATGACCTGAGCACCTTCTTTCCCTTCATCTTTGA
 AGAAGAACCTATCTTCTTCGACACATGGGATAACCAGGCTTATGTGCACGATGCA
 CCTGTACGATCACTGAACTGCACGCTCCGGGACTCACAGCAAAAAAGCTTGGTG
 ATGTCTGGTCCATATGAACTGAAAGCTCTCCACCTCCAGGGACAGGATATGGAGC
 AACAAAGTGGTGTCTCCATGTCCTTTGTACAAGGAGAAGAAAGTAATGACAAAA
 10 TACCTGTGGCCTTGGCCCTCAAGGAAAAGAATCTGTACCTGTCTGCGTGTTGAA
 AGATGATAAGCCCCTCTACAGCTGGAGAGTGTAGATCCCAAAAATTACCCAAA
 GAAGAAGATGGAAAAGCCATTTGTGTTCAACAAGATAGAAATCAATAACAAGCT
 GGAATTTGAGTCTGCCCAGTTCCCCAACTGGTACATCAGCACCTCTCAAGCAGAA
 AACATGCCCGTCTTCTGGGAGGGACCAAAGGCGGCCAGGATATAACTGACTTC
 15 ACCATGCAATTTGTGTCTTCCTAAAGAGAGCTGTACCCAGAGAGTCCTGTGCTGA
 ATGTGGACTCAATCCCTAGGGCTGGCAGAAAGGGAACAGAAAGGTTTTTCAGTA
 CGGCTATAGCCTGGACTTTCTGTGTCTACACCAATGCCCAACTGCCTGCCTTAG
 GGTAGTGCTAAGAGGATCTCCTGTCCATCAGCCAGGACAGTCAGCTCTCTCCTTT
 CAGGCCAATCCCAGCCCTTTTGTGAGCCAGGCCTCTCTCACCTCTCCTACTCACT
 20 TAAAGCCCGCCTCACAGAAACCAGGCCACATTTTGGTTCTAAGAAACCCTCCTCT
 CTCATTCGCTCCACATTCTGATGAGCAACCGCTTCCCTATTTATTTATTTATTTGT
 TTGTTTGTTTTGATTCAATTGGTCTAATTTATTCAAAGGGGGCAAGAAGTAGCAGT
 GTCTGTAAAAGAGCCTAGTTTTTAATAGCTATGGAATCAATTCAATTTGGACTGG
 TGTGCTCTCTTTAAATCAAGTCCTTTAATTAAGACTGAAAATATATAAGCTCAGA
 25 TTATTTAAATGGGAATATTTATAAATGAGCAAATATCATACTGTTCAATGGTTCT
 CAAATAAACTTCACT

SEQ ID NO: 262

>gi|2056756|gb|AA402960.1|AA402960 zu54d12.s1 Soares ovary tumor NbHOT Homo
 sapiens cDNA clone IMAGE:741815 3', mRNA sequence
 30 TTTTTTTTTTTTATATTTACCTTTTTTTATTGAATTTGTATTAAAGGAGGTAGTGAG
 GGGGCGGAACGACTTAAGAGTCAGAATCCATATTAGACTCTGGGGAGTGAAAAA
 TTAAATTAAATCAGTAAGATGGGGAGTGGGGGAAGAGTCAGAGGGAACTTTGCC
 CACCTTTGAAGATCAAATCAAGAAATCAGGGAAAGCAAAGACTTAGGAGAGGA
 35 GAAAGACATTCTCTCAATCCATCCTCCTTCCCCAGGGCAGAGAATTAAACAACGT
 TACTGAGTGAGCCTCTG

SEQ ID NO: 263

>gi|285960|dbj|D14695.1|HUMORF12 Human mRNA for KIAA0025 gene, complete cds
 40 CGTGAACGGTCGTTGCAGAGATTGCGGGCGGCTGAGACGCCGCCTGCCTGGCAC
 CTAGGAGCGCAGCGGAGCCCCGACACCGCCGCCGCCGATGGAGTCCGAGACC
 GAACCCGAGCCCGTCAAGCTCCTGGTGAAGAGCCCCAACCAGCGCCACCGCGAC
 TTGGAGCTGAGTGGCGACCGCGGCTGGAGTGTGGGCCACCTCAAGGCCACCTG
 AGCCGCGTCTACCCCGAGCGTCCGCGTCCAGAGGACCAGAGGTTAATTTATTCTG
 45 GGAAGCTGTTGTTGGATCACCAATGTCTCAGGGACTTGCTTCCAAAGCAGGAAA
 AACGGCATGTTTTGCATCTGGTGTGCAATGTGAAGAGTCCTTCAAAAATGCCAGA
 AATCAACGCCAAGGTGGCTGAATCCACAGAGGAGCCTGCTGGTTCTAATCGGGG
 ACAGTATCCTGAGGATTCCTCAAGTGATGGTTTAAGGCAAAGGGAAGTTCTTCGG
 AACCTTTCTTCCCCTGGATGGGAAAACATCTCAAGGCCTGAAGCTGCCCAGCAGG

CATTCCAAGGCCTGGGTCCTGGTTTCTCCGGTTACACACCCTATGGGTGGCTTCA
 GCTTTCCTGGTTCAGCAGATATATGCACGACAGTACTACATGCAATATTTAGCA
 GCCACTGCTGCATCAGGGGCTTTTGTTCACCACCAAGTGCACAAGAGATACCTG
 TGGTCTCTGCACCTGCTCCAGCCCCTATTCACAACCAGTTTCCAGCTGAAAACCA
 5 GCCTGCCAATCAGAATGCTGCTCCTCAAGTGGTTGTTAATCCTGGAGCCAATCAA
 AATTTGCGGATGAATGCACAAGGTGGCCCTATTGTGGAAGAAGATGATGAAATA
 AATCGAGATTGGTTGGATTGGACCTATTCAGCAGCTACATTTTCTGTTTTCTCAG
 TATCCTCTACTTCTACTCCTCCCTGAGCAGATTCTCATGGTTCATGGGGGCCACCG
 TTGTTATGTACCTGCATCACGTTGGGTGGTTTCCATTTAGACCGAGGCCGGTTCA
 10 GAACTTCCCAAATGATGGTCTCCTCCTGACGTTGTAAATCAGGACCCCAACAAT
 AACTTACAGGAAGGCACTGATCCTGAACTGAAGACCCCAACCACCTCCCTCCA
 GACAGGGATGTACTAGATGGCGAGCAGACCAGCCCCTCCTTTATGAGCACAGCA
 TGGCTTGTCTTCAAGACTTTCTTTGCCTCTCTTCTTCCAGAAGGCCCCCAGCCAT
 CGCAAATGATGGTGTGTTGTGCTGTAGCTGTTGGAGGCTTTGACAGGAATGGACT
 15 GGATCACCTGACTCCAGCTAGATTGCCTCTCCTGGACATGGCAATGATGAGTTTT
 TAAAAACAGTGTGGATGATGATATGCTTTTGTGAGCAAGCAAAAGCAGAAACG
 TGAAGCCGTGATACAAATTGGTGAACAAAAAATGCCCAAGGCTTCTCATGTGTTT
 ATTCTGAAGAGCTTTAATATATACTCTATGTAGTTTAATAAGCACTGTACGTAGA
 AGGCCTTAGGTGTTGCATGTCTATGCTTGAGGAACTTTCCAAATGTGTGTGTCTG
 20 CATGTGTGTTTGTACATAGAAGTCATAGATGCAGAAGTGGTTCTGCTGGTAAGAT
 TTGATTCTGTTGGAATGTTTAAATTACACTAAGTGTACTACTTTATATAATCAAT
 GAAATTGCTAGACATGTTTTAGCAGGACTTTTCTAGGAAAGACTTATGTATAATT
 GCTTTTTAAATGCAGTGCTTFACTTTAACTAAGGGGAACTTTGCGGAGGTGAA
 AACCTTTGCTGGGTTTTCTGTTCAATAAAGTTTTACTATGAATGACCCTG

SEQ ID NO: 264

>gi|1004270|emb|X87159.1|HSSCNN1B H.sapiens mRNA for beta subunit of epithelial amiloride-sensitive sodium channel

TCGCCGGGTGTCCCAGTGTACCAACACTCGGCCGCCGCCGCCAGCTTGGCGCGC
 30 ACCGCCGCCTCCGCCACCGCCGACAGCGCGCATCCTCCGTGTCCCCGCTCCGCCG
 CCCGAGCAGGTGCCACTATGCACGTGAAGAAGTACCTGCTGAAGGGCCTGCATC
 GGCTGCAGAAGGGCCCCGGCTACACGTACAAGGAGCTGCTGGTGTGGTACTGCG
 ACAACACCAACACCCACGGCCCCAAGCGCATCATCTGTGAGGGGGCCCAAGAAGA
 AAGCCATGTGGTTCCTGCTCACCTGCTCTTCGCCGCCCTCGTCTGCTGGCAGTGG
 35 GGCATCTTCATCAGGACCTACTTGAGCTGGGAGGTGAGCGTCTCCCTCTCCGTAG
 GCTTCAAGACCATGGACTTCCCCGCCGTCACCATCTGCAATGCTAGCCCCTTCAA
 GTATTCCAAAATCAAGCATTTGCTGAAGGACCTGGATGAGCTGATGGAAGCTGTC
 CTGGAGAGAATCCTGGCTCCTGAGCTAAGCCATGCCAATGCCACCAGGAACCTG
 AACTTCTCCATCTGGAACCACACACCCCTGGTCCTTATTGATGAACGGAACCCCC
 40 ACCACCCCATGGTCCTTGATCTCTTTGGAGACAACCACAATGGCTTAACAAGCAG
 CTCAGCATCAGAAAAGATCTGTAATGCCACGGGTGCAAAATGGCCATGAGACT
 ATGTAGCCTCAACAGGACCCAGTGTACCTTCCGGAACCTTACCAGTGCTACCCAG
 GCATTGACAGAGTGGTACATCCTGCAGGCCACCAACATCTTTGCACAGGTGCCAC
 AGCAGGAGCTAGTAGAGATGAGCTACCCCGGCGAGCAGATGATCCTGGCCTGCC
 45 TATTCGGAGCTGAGCCCTGCAACTACCGGAACCTTACGTCCATCTTCTACCCTCA
 CTATGGCAACTGTTACATCTTCAACTGGGGCATGACAGAGAAGGCACTTCCTTCG
 GCCAACCCTGGAAGTGAATTCGGCCTGAAGTTGATCCTGGACATAGGCCAGGAA
 GACTACGTCCCTTCTTTCGCTCCACGGGCGGGGTCAGGCTGATGCTTCACGAGC
 AGAGGTCATACCCCTTCATCAGAGATGAGGGCATCTACGCCATGTCGGGGACAG

AGACGTCCATCGGGGTACTCGTGGATAAGCTTCAGCGCATGGGGGAGCCCTACA
 GCCCGTGCACCGTGAATGGTTCTGAGGTCCCCGTCCAAACTTCTACAGTACTA
 CAACACGACCTACTCCATCCAGGCCTGTCTTCGCTCCTGCTTCCAAGACCACATG
 ATCCGTAACCTGCAACTGTGGCCACTACCTGTACCCACTGCCCCGTGGGGAGAAAT
 5 ACTGCAACAACCGGGACTTCCCAGACTGGGCCCATTTGCTACTCAGATCTACAGAT
 GAGCGTGGCGCAGAGAGAGACCTGCATTGGCATGTGCAAGGAGTCCTGCAATGA
 CACCCAGTACAAGATGACCATCTCCATGGCTGACTGGCCTTCTGAGGCCTCCGAG
 GACTGGATTTTCCACGTCTTGTCTCAGGAGCGGGACCAAAGCACCAATATCACCC
 TGAGCAGGAAGGGAATTGTCAAGCTCAACATCTACTTCCAAGAATTTAACTATCG
 10 CACCATTGAAGAATCAGCAGCCAATAACATCGTCTGGCTGCTCTCGAATCTGGGT
 GGCCAGTTTGGCTTCTGGATGGGGGGCTCTGTGCTGTGCCTCATCGAGTTTGGGG
 AGATCATCATCGACTTTGTGTGGATCACCATCATCAAGCTGGTGGCCTTGGCCAA
 GAGCCTACGGCAGCGGCGAGCCCAAGCCAGCTACGCTGGCCCACCGCCCACCGT
 GGCCGAGCTGGTGGAGGCCACACCAACTTTGGCTTCCAGCCTGACACGGCCCCC
 15 CGCAGCCCCAACACTGGGCCCTACCCAGTGAGCAGGCCCTGCCCATCCCAGGC
 ACCCCGCCCCCAACTATGACTCCCTGCGTCTGCAGCCGCTGGACGTCATCGAGT
 CTGACAGTGAGGGTGATGCCATCTAACCTGCCCCGTGCCACCCCGGGTGGGTGA
 AACTCACTGAGCAGCCAAGACTGTTGCCCGAGGACTCACTGTATGGTGGCCTCTC
 CAAAGGGTCGGGAGGGTAGCTCTCCAGGCCAGAGCTTGTGTCCTTCAACAGAGA
 20 GGCCAGCGGCAACTGGTCCGTTACTGGCCAAGGGCTCTGAAGAATCAACGGTGC
 TGGTACAGGATACAGGAATAAATTGTATCTTCACCTGGTTCCCTACCCTCGTCCCT
 ACCTGTCCTGATCCTGGTCCCTGAAGACCCCTCGGAACACCCTCTCCTGGTGGCAG
 GCCAGTCCCTCCCAGTGCCAGTCTCCATCCACCCAGAGAGGAACAGGGGGGTG
 GGCCATGTGGTTTTCTCCTTCCCTGGCCTTGGCTGGCCTCTGGGGCAGGGGTGGTG
 25 GAGAGATGGAAGGGCATCAGGTGTAGGGACCCTGCCAAGTGGCACCTGATTTAC
 TCTAGAAAATAAAAAGTAGAAAATACTGAGAAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 265

>gi|1408187|gb|U59167.1|HSU59167 Human desmin mRNA, complete cds

30 CCTCGCCGCATCCACTCTCCGGCCGGCCGCTGCCCCGCCCTCCTCCGTGCGCC
 CGCCAGCCTCGCCCGCGCCGTCACCATGAGCCAGGCCTACTCGTCCAGCCAGCGC
 GTGTCCTCCTACCGCCGCACCTTCGGCGGCGCCCCGGGCTTCCCGCTCGGCTCCC
 CGCTGAGCTCGCCCGTGTTCCTCGCGGGCGGGTTTCGGCTCTAAGGGCTCCTCCAG
 CTCGGTGACGTCCCGCGTGTACCAGGTGTCGCGCACGTGCGGGCGGGGCGGGGG
 35 CCTGGGGTTCGCTGCGGGGCCAGCCGGCTGGGGACCACCCGCACGCCCTCCTCCTAC
 GGCGCAGGCGAGCTGCTGGACTTCTCACTGGCCGACGCGGTGAACCAGGAGTTT
 CTGACCACGCGCACCAACGAGAAGGTGGAGCTGCAGGAGCTCAATGACCGCTTC
 GCCAACTACATCGAGAAGGTGCGCTTCCTGGAGCAGCAGAACGCGCTCGCCGCC
 GAAGTGAACCGGCTCAAGGGCCGCGAGCCGACGCGAGTGGCCGAGCTCTACGAG
 40 GAGGAGCTGCGGGAGCTGCGGCGCCAGGTGGAGGTGCTCACTAACCAGCGCGCG
 CGCGTCGACGTCGAGCGCGACAACCTGCTCGACGACCTGCAGCGGCTCAAGGCC
 AAGCTGCAGGAGGAGATTCAAGTTGAAGGAAGAAGCAGAGAACAATTTGGCTGCC
 TTCCGAGCGGACGTGGATGCAGCTACTCTAGCTCGCATTGACCTGGAGCGCAGA
 ATTGAATCTCTCAACGAGGAGATCGCGTTCCTTAAGAAAGTGCATGAAGAGGAG
 45 ATCCGTGAGTTGCAGGCTCAGCTTCAGGAACAGCAGGTCCAGGTGGAGATGGAC
 ATGTCTAAGCCAGACCTCACTGCCGCCCTCAGGGATATCCGGGCTCAGTATGAGA
 CCATCGCGGCTAAGAACATTTCTGAAGCTGAGGAGTGGTACAAGTCGAAGGTGT
 CAGACCTGACCCAGGCAGCCAACAAGAACAACGACGCCCTGCGCCAGGCCAAGC
 AGGAGATGATGGAATACCGACACCAGATCCAGTCCTACACCTGCGAGATTGACG

CCCTCAAGGGCACTAACGATTCCCTGATGAGGCAGATGCGGGAATTGGAGGACC
GATTTGCCAGTGAGGCCAGTGGCTACCAGGACAACATTGCGCGCCTGGAGGAAG
AAATCCGGGCACCTCAAGGATGAGATGGCCCGCCATCTGCGCGAGTACCAGGACC
TGCTCAACGTGAAGATGGCCCTGGATGTGGAGATTGCCACCTACCGGAAGCTGCT
5 GGAGGGAGAGGAGAGCCGGATCAATCTCCCCATCCAGACCTACTCTGCCCTCAA
CTTCCGAGAAACCAGCCCTGAGCAAAGGGGTTCTGAGGTCCATACCAAGAAGAC
GGTGATGATCAAGACCATCGAGACACGGGATGGGGAGGTCGTCAGTGAGGCGAC
ACAGCAGCAGCATGAAGTGCTCTAAAGACGAGAGACCCTCTGCCACCAGAGACC
GTCCTCACCCCTGTCCTCACTGCTCCCTGAAGCCCAGCCTTCTTCCATCCCAGGAC
10 ACCACACCCAGCCTCAGTCTCCCGTCACAGCCTCTGACCCCTCCTCACTGGCCA
TCCCTCGTGGTCCCCAACAGCGACATAGCCCATCCCTGCCTGGTCACAGGCATGC
CCCGGCCACCTCTGCGGACCCAGCTGTGAGCCTTGGCTGTTGGCAGTGAGTGAG
CCTGGCTCTTGTGCTGGATGGAGCCCAGGCGGGAGCGGTGGCCCTGTCCCTCCCA
CCTCTGTGACCTGAGGCCTACGCTTTGGCTCTGGAGATAGCCCCAGAGCAGGGTG
15 TTGGGATACTGCAGGGCCAGGACTGAGCCCCGCAGACCTCCCCAGCCCCTAGCC
CAGGAGAGAGAAAGCCAGGCAGGTAGCCTGGGGGACTAGCCCTGTGGAGACTG
GGGGGCTTGAAATTGTCCCCGTGGTCTCTTACTTTCCCTTCCCCAGCCCAGGGTGG
ACTTAGAAAGCAGGGGGCTACAAGAGGGGAATCCCCGAAGGTGCTGGAGGTGGGA
GCAGGAGATTGAGAAGGAGAGAAAGTGGGTGAGATGCTGGAGAAGAGAGAGGA
20 GGAGAGAGGCAGAGAGCGGTCTGAGGCTGGTGGGAGGGGCGCCACCTCCCCAC
GCCCTCCCCCCCCCTGCTGCAGGGGCTCTGGAGAGAAACAATAAA

SEQ ID NO: 266
>1649377H1

25 GCCCAGTTAAATAACATTGACAGACTTGCCAACACGATCACAATGATCGAAGAG
GAGATGGTGCAGCTTCGCAAAAGATACGAAAAAGCTGTTCAGCATCGAAATGAA
AGGTAAAAACCAGCCTCTGCCTCTGAATTTGACCATAGTGGCGTTTCACTGATAG
AGCGGGAAGAAGAAATATGCATTTTTTATGAAAAATAAATATCCAAGAGAAGA
TGAAACTAAAT

30
SEQ ID NO: 267

>gi|347522|gb|L22206.1|HUMV2R Human vasopressin receptor V2 gene, complete cds
AGAAGATCCTGGGTTCTGTGCATCCGTCTGTCTGACCATCCCTCTCAATCTTCCCT
GCCCAGGACTGGCCATACTGCCACCGCACACGTGCACACACGCCAACAGGCATC
35 TGCCATGCTGGCATCTCTATAAGGGCTCCAGTCCAGAGACCCTGGGGCCATTGAAC
TTGCTCCTCAGGCAGAGGCTGAGTCCGCACATCACCTCCAGGCCCTCAGAACACC
TGCCCCAGCCCCACCATGCTCATGGCGTCCACCACTTCCGGTAAGGCTTGCCCCCT
CCATGAGTCCGGTGGGCAGAGTGGGTTTGACGATTGAGGGAAGCCCCTCTTTCTA
AAGACCTCCTTCACCCTCACCTCTGGGTGTGTCTCTCCAGGCTGCCAATGAGTGG
40 GGAGGGGAGCACAGCCCCACTTCCCCGCCAGGGCTGGGGCTGGGGCTGGGGCTG
GGGCTGCCCTTCTTCTGGACTGCATGAGCCTGGGGTGTGTATCCCTCATAACAT
GGCTTTCCTGGAGTCCCCTCTGCTAGGAGCCAGGAAGTGGGTGTCCGGATGGGG
GCACGGGAGGCAGGCCTGAGTCCCCCTGCACAGCACCTCTCTAACCAGGCCCTC
TCCCCGACTCCTGCCAGCTGTGCCTGGGCATCCCTCTCTGCCAGCCTGCCCAGC
45 AACAGCAGCCAGGAGAGGGCCACTGGACACCCGGGACCCGCTGCTAGCCCGGGCG
GAGCTGGCGCTGCTCTCCATAGTCTTTGTGGCTGTGGCCCTGAGCAATGGCCTGG
TGCTGGCGGCCCTAGCTCGGCGGGGCGGCGGGGCCACTGGGCACCCATACACG
TCTTCATTGGCCACTTGTGCCTGGCCGACCTGGCCGTGGCTCTGTTCCAAGTGCTG
CCCCAGCTGGCCTGGAAGGCCACCGACCGCTTCCGTGGGCCAGATGCCCTGTGTC

GGGCCGTGAAGTATCTGCAGATGGTGGGCATGTATGCCTCCTCCTACATGATCCT
GGCCATGACGCTGGACCGCCACCGTGCCATCTGCCGTCCTATGCTGGCGTACCGC
CATGGAAGTGGGGCTCACTGGAACCGGCCGGTGCTAGTGGCTTGGGCCTTCTCGC
TCCTTCTCAGCCTGCCCCAGCTCTTCATCTTCGCCCAGCGCAACGTGGAAGGTGG
5 CAGCGGGGTCACTGACTGCTGGGCCTGCTTTGCGGAGCCCTGGGGCCGTGCGACC
TATGTCACCTGGATTGCCCTGATGGTGTTCGTGGCACCTACCCTGGGTATCGCCG
CCTGCCAGGTGCTCATCTTCCGGGAGATTGATGCCAGTCTGGTGCCAGGGGCCATC
AGAGAGGCCTGGGGGGCGCCGCAGGGGACGCCGGACAGGCAGCCCCGGTGAGG
GAGCCACGTGTCAGCAGCTGTGGCCAAGACTGTGAGGATGACGCTAGTGATTG
10 TGGTCGTCTATGTGCTGTGCTGGGCACCCTTCTTCCTGGTGACGCTGTGGGCCGC
GTGGGACCCGGAGGCACCTCTGGAAGGTGGGTGTAGCCGTGGCTAGGGCTGACG
GGGCCACTTGGGCTTGGCCGCATGCCCCTGTGCCCCACCAGCCATCCTGAACCCA
ACCTAGATCCTCCACCTCCACAGGGGCGCCCTTTGTGCTACTCATGTTGCTGGCC
AGCCTCAACAGCTGCACCAACCCCTGGATCTATGCATCTTTCAGCAGCAGCGTGT
15 CCTCAGAGCTGCGAAGCTTGCTCTGCTGTGCCCGGGGACGCACCCACCCAGCCT
GGGTCCCCAAGATGAGTCCTGCACCACCGCCAGCTCCTCCCTGGCCAAGGACACT
TCATCGTGAGGAGCTGTTGGGTGTCTTGCTCTAGAGGCTTTGAGAAGCTCAGCT
GCCTTCCTGGGGCTGGTCCTGGGAGCCACTGGGAGGGGGACCCGTGGAGAATTG
GCCAGAGCCTGTGGCCCCGAGGCTGGGACACTGTGTGGCCCTGGACAAGCCACA
20 GCCCCTGCCTGGGTCTCCACATCCCCAGCTGTATGAGGAGAGCTTCAGGCCCCAG
GACTGTGGGGGGCCCTCAGGTCAGCTCACTGAGCTGGGTGTAGGAGGGGCTGCA
GCAGAGGCCTGAGGAGTGGCAGGAAAGAGGGAGCAGGTGCCCCAGGTGAGAC
AGCGGTCCCAGGGGCCTGAAAAGGAAGGACCAGGCTGGGGCCAGGGGACCTTCT
TGTCTCCGCCTTTCTAATCCCTCCCTCCTCATTCTCTCCCTAATAAAAAAFTGGAGC
25 TCATTTTCCACATGGCAAGGGGTCTCCTTGGATCCTCT

SEQ ID NO: 268

>gi|28720|emb|X06989.1|HSAPA4R Human mRNA for amyloid A4(751) protein

GAATTCCCGCGGAGCAGCGTGCGCGGGGCCCCGGGAGACGGCGGGCGGTAGCGGC
30 GCGGGCAGAGCAAGGACGCGGCGGATCCCACTCGCACAGCAGCGCACTCGGTGC
CCCGCGCAGGGTCGCGATGCTGCCCGGTTTGGCACTGCTCCTGCTGGCCGCCTGG
ACGGCTCGGGCGCTGGAGGTACCCACTGATGGTAATGCTGGCCTGCTGGCTGAA
CCCCAGATTGCCATGTTCTGTGGCAGACTGAACATGCACATGAATGTCCAGAATG
GGAAGTGGGATTGAGATCCATCAGGGACCAAAACCTGCATTGATACCAAGGAAG
35 GCATCCTGCAGTATTGCCAAGAAGTCTACCCTGAACTGCAGATCACCAATGTGGT
AGAAGCCAACCAACCAGTGACCATCCAGAAGTGGTGCAAGCGGGGCCGCAAGCA
GTGCAAGACCCATCCCCACTTTGTGATTCCCTACCGCTGCTTAGTTGGTGAGTTTG
TAAGTGATGCCCTTCTCGTTCCCTGACAAGTGCAAATTCTTACACCAGGAGAGGAT
GGATGTTTGCGAAACTCATCTTCACTGGCACACCGTCGCCAAAGAGACATGCAGT
40 GAGAAGAGTACCAACTTGCATGACTACGGCATGTTGCTGCCCTGCGGAATTGAC
AAGTTCCGAGGGGTAGAGTTTGTGTGTTGCCCACTGGCTGAAGAAAGTGACAAT
GTGGATTCTGCTGATGCGGAGGAGGATGACTCGGATGTCTGGTGGGGCGGAGCA
GACACAGACTATGCAGATGGGAGTGAAGACAAAGTAGTAGAAGTAGCAGAGGA
GGAAGAAGTGGCTGAGGTGGAAGAAGAAGAAGCCGATGATGACGAGGACGATG
45 AGGATGGTGATGAGGTAGAGGAAGAGGCTGAGGAACCCTACGAAGAAGCCACA
GAGAGAACCACCAGCATTGCCACCACCACCACCACCACAGAGTCTGTGGAA
GAGGTGGTTGAGAGGTGTGCTCTGAACAAGCCGAGACGGGGCCGTGCCGAGCA
ATGATCTCCCGCTGGTACTTTGATGTGACTGAAGGGAAGTGTGCCCCATTCTTTT
ACGGCGGATGTGGCGGCAACCGGAACAACCTTTGACACAGAAGAGTACTGCATGG

CCGTGTGTGGCAGCGCCATTCTACAACAGCAGCCAGTACCCCTGATGCCGTTGA
CAAGTATCTCGAGACACCTGGGGATGAGAATGAACATGCCCATTTCCAGAAAGC
CAAAGAGAGGCTTGAGGCCAAGCACCGAGAGAGAATGTCCCAGGTCATGAGAG
AATGGGAAGAGGCAGAACGTCAAGCAAAGAAGCTTGCCTAAAGCTGATAAGAAG
5 GCAGTTATCCAGCATTTCCAGGAGAAAGTGGAATCTTTGGAACAGGAAGCAGCC
AACGAGAGACAGCAGCTGGTGGAGACACACATGGCCAGAGTGGAAGCCATGCTC
AATGACCGCCGCCGCTGGCCCTGGAGAACTACATCACCGCTCTGCAGGCTGTTT
CTCCTCGGCCTCGTCACGTGTTCAATATGCTAAAGAAGTATGTCCGCGCAGAAC
GAAGGACAGACAGCACACCCTAAAGCATTTCGAGCATGTGCGCATGGTGGATCC
10 CAAGAAAGCCGCTCAGATCCGGTCCCAGGTTATGACACACCTCCGTGTGATTTAT
GAGCGCATGAATCAGTCTCTCTCCCTGCTCTACAACGTGCCTGCAGTGGCCGAGG
AGATTCAGGATGAAGTTGATGAGCTGCTTCAGAAAGAGCAAACTATTCAGATG
ACGTCTTGCCAAACATGATTAGTGAACCAAGGATCAGTTACGGAAACGATGCTCT
CATGCCATCTTTGACCGAAACGAAAACCAACCGTGGAGCTCCTTCCCGTGAATGGA
15 GAGTTCAGCCTGGACGATCTCCAGCCGTGGCATTCTTTTGGGGCTGACTCTGTGC
CAGCCAACACAGAAAACGAAGTTGAGCCTGTTGATGCCCCGCCCTGCTGCCGACC
GAGGACTGACCACTCGACCAGGTTCTGGGTTGACAAATATCAAGACGGAGGAGA
TCTCTGAAGTGAAGATGGATGCAGAATTCCGACATGACTCAGGATATGAAGTTC
ATCATCAAAAATTGGTGTCTTTGCAGAAGATGTGGGTTCAAACAAAGGTGCAAT
20 CATTGGACTCATGGTGGGCGGTGTTGTCATAGCGACAGTGATCGTCATCACCTTG
GTGATGCTGAAGAAGAAACAGTACACATCCATTCATCATGGTGTGGTGGAGGTT
GACGCCGCTGTCACCCCAGAGGAGCGCCACCTGTCCAAGATGCAGCAGAACGGC
TACGAAAATCCAACCTACAAGTTCTTTGAGCAGATGCAGAACTAGACCCCGCC
ACAGCAGCCTCTGAAGTTGGACAGCAAAACCATTTGCTTCACTACCCATCGGTGTC
25 CATTTATAGAATAATGTGGGAAGAAACAAACCCGTTTTATGATTTACTCATTATC
GCCTTTTGACAGCTGTGCTGTAACACAAGTAGATGCCTGAACTTGAATTAATCCA
CACATCAGTAATGTATTCTATCTCTTTACATTTTGGTCTCTATACTACATTATTA
ATGGGTTTTGTGTACTGTAAAGAATTTAGCTGTATCAAACCTAGTGCATGAATAGA
TTCTCTCCTGATTATTTATCACATAGCCCCTTAGCCAGTTGTATATTATTCTTGTG
30 GTTTGTGACCCAATTAAGTCCTACTTTACATATGCTTTAAGAATCGATGGGGGAT
GCTTCATGTGAACGTGGGAGTTTCACTGCTTCTCTGCCTAAGTATTCCTTTCCTG
ATCACTATGCATTTTAAAGTTAAACATTTTAAAGTATTTTCAAGATGCTTTAGAGAG
ATTTTTTTTCCATGACTGCATTTTACTGTACAGATTGCTGCTTCTGCTATATTTGTG
ATATAGGAATTAAGAGGATACACACGTTTGTCTTCTCGTGCCTGTTTTATGTGCAC
35 ACATTAGGCATTGAGACTTCAAGCTTTTCTTTTTTTGTCCACGTATCTTTGGGTCT
TTGATAAAGAAAAGAATCCCTGTTCATTGTAAGCACTTTTACGGGGCGGGTGGGG
AGGGGTGCTCTGCTGGTCTTCAATTACCAAGAATTC

SEQ ID NO: 269

40 >3107995H1
TAAACATCCCAAAACTGGAGTTTTTCGAAGAGAAACATGCCAAACCTCCAGATGT
AGACCT
TAAAAAGTTCTTTACAGACAGGAAGACTCATCTTTATACCCTTGTGATGAATCCA
GATGA
45 CACATTTGAGGTGTTAGTTGATCAAACAGTTGTAAACAAAGGAAGCCTCCTAGA
GGATGT
GGTTCCTCCTATCAAACCTCC

SEQ ID NO: 270

>gi|179579|gb|M17017.1|HUMBTLP Human beta-thromboglobulin-like protein mRNA, complete cds

ACAAACTTTCAGAGACAGCAGAGCACACAAGCTTCTAGGACAAGAGCCAGGAAG
5 AAACCACCGGAAGGAACCATCTCACTGTGTGTAACATGACTTCCAAGCTGGCC
GTGGCTCTCTTGGCAGCCTTCCTGATTTCTGCAGCTCTGTGTGAAGGTGCAGTTTT
GCCAAGGAGTGCTAAAGAACTTAGATGTCAGTGCATAAAGACATACTCCAAACC
TTTCCACCCCAAATTTATCAAAGAACTGAGAGTGATTGAGAGTGGACCACACTGC
GCCAACACAGAAATTATTGTAAAGCTTTCTGATGGAAGAGAGCTCTGTCTGGACC
10 CCAAGGAAAACCTGGGTGCAGAGGGTGTGGAGAAGTTTTTGAAGAGGGCTGAGA
ATTCATAAAAAAATTCATTCTCTGTGGTATCCAAGAATCAGTGAAGATGCCAGTG
AAACTTCAAGCAAATCTACTTCAACACTTCATGTATTGTGTGGGTCTGTTGTAGG
GTTGCCAGATGCAATACAAGATTCCTGGTTAAATTTGAATTTTCAGTAAACAATGA
ATAGTTTTTTCATTGTACCATGAAATATCCAGAACATACTTATATGTAAAGTATTAT
15 TTATTTGAATCTACAAAAACAACAAATAATTTTTGAATATAAGGATTTTCCTAG
ATATTGCACGGGAGAATATACAAATAGCAAATTTGGGCCAAGGGCCAAGAGAAT
ATCCGAACCTTTAATTTTCAGGAATTGAATGGGTTTGCTAGAATGTGATATTTGAAG
CATCACATAAAAAATGATGGGACAATAAATTTTGCCATAAAGTCAAATTTAGCTGG
AAATCCTGGATTTTTTTCTGTAAATCTGGCAACCCTAGTCTGCTAGCCAGGATCC
20 ACAAGTCCTTGTTCCACTGTGCCTTGGTTTCTCCTTTATTTCTAAGTGGAAAAAGT
ATTAGCCACCATCTTACCTCACAGTGATGTTGTGAGGACATGTGGAAGCACTTTA
AGTTTTTTCATCATAACATAAATTATTTTCAAGTGTAACTTATTAACCTATTTATT
ATTEATGTATTTATTTAAGCATCAAATATTTGTGCAAGAATTTGGAAAAATAGAA
GATGAATCATTGATTGAATAGTTATAAAGATGTTATAGTAAATTTATTTATTTTA
25 GATATTAAATGATGTTTTATTAGATAAATTTCAATCAGGGTTTTTAGATTAAACA
AACAAACAATTGGGTACCCAGTTAAATTTTCATTTTCAGATAAACAACAAATAATT
TTTTAGTATAAGTACATTATTGTTTATCTGAAATTTTAATTGAACTAACAAATCCTA
GTTTGATACTCCCAGTCTTGTCATTGCCAGCTGTGTTGGTAGTGCTGTGTTGAATT
ACGGAATAATGAGTTAGAACTATTAACAAACAGCCAAAACCTCCACAGTCAATATTA
30 GTAATTTCTTGCTGGTTGAACTTGTATTATGTACAAATAGATTCTTATAATAT
TATTTAAATGACTGCATTTTTTAAATACAAGGCTTTATATTTTTTAACTTTAAGATGT
TTTTATGTGCTCTCCAAATTTTTTTTACTGTTTCTGATTGTATGGAAATATAAAAG
TAAATATGAAACATTTAAAATATAATTTGTTGTCAAAGT

35 SEQ ID NO: 271

>gi|521214|gb|L33404.1|HUMSERPROT Human stratum corneum chymotryptic enzyme mRNA, complete cds

GGATTTCCGGGCTCCATGGCAAGATCCCTTCTCCTGCCCCTGCAGATCCTACTGCT
ATCCTTAGCCTTGGAACCTGCAGGAGAAGAAGCCCAGGGTGACAAGATTATTGA
40 TGGCGCCCCATGTGCAAGAGGCTCCCACCCATGGCAGGTGGCCCTGCTCAGTGGC
AATCAGCTCCACTGCGGAGGCGTCTGGTCAATGAGCGCTGGGTGCTCACTGCCG
CCCCTGCAAGATGAATGAGTACACCGTGCACCTGGGCAGTGATACGCTGGGCG
ACAGGAGAGCTCAGAGGATCAAGGCCTCGAAGTCATTCCGCCACCCCGGCTACT
CCACACAGACCCATGTTAATGACCTCATGCTCGTGAAGCTCAATAGCCAGGCCAG
45 GCTGTCATCCATGGTGAAGAAAGTCAGGCTGCCCTCCCGCTGCGAACCCCTGGA
ACCACCTGTACTGTCTCCGGCTGGGGCACTACCACGAGCCCAGATGTGACCTTTC
CCTCTGACCTCATGTGCGTGGATGTCAAGCTCATCTCCCCCAGGACTGCACGAA
GGTTTACAAGGACTTACTGGAAAATTCATGCTGTGCGCTGGCATCCCCGACTCC
AAGAAAAACGCCTGCAATGGTGACTCAGGGGGACCGTTGGTGTGCAGAGGTACC

CTGCAAGGTCTGGTGTCTGCTGGGGAACCTTCCCTTGCGGCCAACCCAATGACCCAG
 GAGTCTACACTCAAGTGTGCAAGTTCACCAAGTGGATAAATGACACCATGAAAA
 AGCATCGCTAACGCCACACTGAGTTAATTAAGTGTGTGCTTCCAACAGAAAATGC
 ACAGGAGTGAGGACGCCGATGACCTATGAAGTCAAATTTGACTTTACCTTTCCTC
 5 AAAGATATATTTAAACCTCATGCCCTGTTGATAAACCAATCAAATTGGTAAAGAC
 CTAAAACCAAAACAAATAAAGAAACACAAAACCCTCAA

SEQ ID NO: 272

>2726949H1

10 GTAAAACGGTGGTCTCAATGCCCACTTAGCCTCTGCCTCTGAATTTGACCATAGT
 GCGTTCAGCTGATAGAGCGGGAAGAAGAAATATGCATTTTTTATGAAAAAATA
 AATATCCAAGAGAAGATGAACTAAATGGAGAAATTGAAATACATCTACTGGAA
 GAAAAGATCCAATTCCTGAAAATGAAGATTGCTGAGAAGCAAAGACAAATTTGT
 GTGACCCAGAAATTACTGCCAGCCAAGAGG

15

SEQ ID NO: 273

>2726952H1

TGGTCTCAATGCCCACTTAGCCTCTGCCTCTGAATTTGACCATAGTGGCGTTCAGC
 TGATAGAGCGGGAAGAAGAAATATGCATTTTTTATGAAAAAATAAATATCCAAG
 20 AGAAGATGAACTAAATGGAGAAATTGAAATACATCTACTGGAAGAAAAGATCC
 AATTCCTGAAAATGAAGATTGCTGAGAAGCAAAGACAAATTTGTGTGACCCAGA
 AATTACTGCCAGCCAAGAGGTC

SEQ ID NO: 274

25 >gi|990907|gb|H51066.1|H51066 yp84g12.s1 Soares fetal liver spleen 1NFLS Homo sapiens
 cDNA clone IMAGE:194182 3', mRNA sequence
 TGAGCAGGTAACACCCAGGNCATTTTGATGAGATCCAAAGGAGTTGTATGCACA
 TGAAAGTTTGAGAAGCATCATAGAGAAGTAAACATCACACCCAACCTTCCTTA
 TCTTTCCAGTGGCTAAACCACTTAACCTCTCTGGGTGTTACCTGCTCATTTGTTTA
 30 AAAAAAAAAAAAAAAAAAGTCTCACCTGCTTTCATGCTGAGGNCAAGTTCAGATGTT
 CAAGCCTATAATATTTNGGCAGTTCNCNAAATTTATGAAAAGNGTTCTCAGAATT
 GGGGAGACAGTCAAAGGGTNCAAAGCCTCAGTTAGGGGGGNTAAGTGTGATTTT
 TTTTAAAGNTCACTTGCACAGCCTGGCTAAATTTAGGGGTAATTGGAATGTATA
 TTTNCAA

35

SEQ ID NO: 275

>gi|2159230|gb|AA446565.1|AA446565 zw84b11.s1 Soares_total_fetus_Nb2HF8_9w Homo
 sapiens cDNA clone IMAGE:783645 3', mRNA sequence

TTTTTCAAATATATACATTTTAAATATTTGAAATATTTACATAATGGAACCACAT
 40 CAGGGTTCGAGGGTAAGAACAGTGTTTTCAAATGTCCTCTCCAGGTGTGTTTAAA
 AAAAAAAAAAATCCAGTAATCCAAAGCTCACATTATGCTTTTTCTAACAGGCCAA
 TCTTTACCTTTCTTTTAAATAAGTACTCAGACATGGGAACAGTTGCATCTAATTTG
 TGTGAAAAGCTGTTTAAACTTCTTACGTTTTTCAGGTAATTTTACTCCCTGGTGAA
 ATTCTGATCTACAACGAAGAAAGCCCCAGGAATTTCTCTAAGCACATCATCAGTA
 45 CATTTTTAAACACTAATGAGCCAAGGTAAACAAGATATAAACCTTCTACAAGA
 CAAAAATGAAAACAAATGGTTAGTGGTTGGTAACTGCCTTGAA

SEQ ID NO: 276

>gi|749387|gb|T99650.1|T99650 ye73h09.s1 Soares fetal liver spleen 1NFLS Homo sapiens
cDNA clone IMAGE:123425 3', mRNA sequence

CAATAAAATGATTTATTTTATATATGCAAAATCAAAATCTCTTTGTACACTTTAAT
5 TTTTGCAAATTCATACAAACATAACAATACTGCTCCATATAAACTTTTGTATAAA
CATTAAAGGAAATATACACATATTTNGTTCTTCTTGTGCTTCCAAAGCACAGAAT
GTATAAGTCCATCTGAAGACTTTCTATCATCACATGCAAGAACAATGTCAGAGG
TTGGGGGCAGCCTCAAGTGCACCTTTGTAATGTCTCTAGACAAAAGAGAAGAGAG
TTGGAGGTAGGATTGTTTGGGTGACTCTCCCTGCCCCCTTCCCACAGAGGAAATAA
10 GGTACCCCAAATAGGCAGCTTCTTACTTCTTTGGATTCAAACCTATCCTGGANTAT
TGCATGGGTTTTTAAAAGGGCNCCAAC

SEQ ID NO: 277

>463614H1

GCTTTGGTCTATGACCTCTGATATCTACTTTGATAATTTTATTATCTGTTTCGGAAA
15 AGGAAGTAGCAGATCACTGGGCTGCAGATGGTTGGAGATGGAAAATAATGATAG
CAAATGCTAATAAGCCTGGTGTATTAACAGTTAATGGCAGCTGCTGAAGGGC
ACCCATGGCTTTGGTTGATTTATCTTGTGACAGCAGGAGTGCCAATAGCATTAAAT
TACTTCATTTTGT

20

SEQ ID NO: 278

>gi|31298|emb|Y00318.1|HSFACI Human mRNA for complement control protein factor I

GAGAGACAAAGACCCCGAACACCTCCAACATGAAGCTTCTTCATGTTTTCCTGTT
ATTTCTGTGCTTCCACTTAAGGTTTTGCAAGGTCACCTATACATCTCAAGAGGATC
25 TGGTGGAGAAAAAGTGCTTAGCAAAAAAATACTCACCTCTCCTGCGATAAAG
TCTTCTGCCAGCCATGGCAGAGATGCATTGAGGGCACCTGTGTTTGTAAGTACC
GTATCAGTGCCCAAAGAATGGCACTGCAGTGTGTGCAACTAACAGGAGAAGCTT
CCCAACATACTGTCAACAAAAGAGTTTGAATGTCTTCATCCAGGGACAAAGTTT
TTAAATAACGGAACATGCACAGCCGAAGGAAAGTTTAGTGTTTCCTTGAAGCAT
30 GGAAATACAGATTTCAGAGGGAATAGTTGAAGTAAACTTGTGGACCAAGATAAG
ACAATGTTTCATATGCAAAAGCAGCTGGAGCATGAGGGAAGCCAACGTGGCCTGC
CTTGACCTTGGGTTTCAACAAGGTGCTGATACTCAAAGAAGGTTTAAGTTGTCTG
ATCTCTCTATAAATCCACTGAATGTCTACATGTGCATTGCCGAGGATTAGAGAC
CAGTTTGGCTGAATGTACTTTTACTAAGAGAAGAACTATGGGTACCAGGATTTC
35 GCTGATGTGGTTTGTATACACAGAAAGCAGATTCTCCAATGGATGACTTCTTTC
AGTGTGTGAATGGGAAATACATTTCTCAGATGAAAGCCTGTGATGGTATCAATGA
TTGTGGAGACCAAAGTGATGAACTGTGTTGTAAAGCATGCCAAGGCAAAGGCTT
CCATTGCAAATCGGGTGTTTGCATTCCAAGCCAGTATCAATGCAATGGTGAGGTG
GACTGCATTACAGGGGAAGATGAAGTTGGCTGTGCAGGCTTTGCATCTGTGGCTC
40 AAGAAGAAACAGAAATTTTGAATGCTGACATGGATGCAGAAAGAAGACGGATA
AAATCATTATTACCTAAACTATCTTGTGGAGTTAAAAACAGAATGCACATTCGAA
GGAAACGAATTGTGGGAGGAAAGCGAGCACAACCTGGGAGACCTCCCATGGCAG
GTGGCAATTAAGGATGCCAGTGAATCACCTGTGGGGGAATTTATATTGGTGGCT
GTTGGATTCTGACTGCTGCACATTGTCTCAGAGCCAGTAAACTCATCGTTACCA
45 AATATGGACAACAGTAGTAGACTGGATACACCCCGACCTTAAACGTATAGTAAT
TGAATACGTGGATAGAATTATTTCCATGAAAACCTACAATGCAGGCACTTACCAA
AATGACATCGCTTTGATTGAAATGAAAAAAGACGGAAACAAAAAAGATTGTGAG
CTGCCTCGTTCCATCCCTGCCTGTGTCCCCTGGTCTCCTTACCTATTCCAACCTAA
TGATACATGCATCGTTTCTGGCTGGGGACGAGAAAAAGATAACGAAAGAGTCTT

TTCAC TTCAGTGGGGTGAAGTTAACTAATAAGCAACTGCTCTAAGTTTACGGA
AATCGTTTCTATGAAAAAGAAATGGAATGTGCAGGTACATATGATGGTTCCATCG
ATGCCTGTAAAGGGGACTCTGGAGGCCCTTAGTCTGTATGGATGCCAACAATGT
GACTTATGTCTGGGGTGTGTGTGAGTTGGGGGGAAAACTGTGGAAAACAGAGTT
5 CCCAGGTGTTTACACCAAAGTGGCCAATTATTTTACTGGATTAGCTACCATGTA
GGAAGGCCTTTTATTTCTCAGTACAATGTATAAAATTGTGATCTCTCTTCATTC
TATTCTTTTCTCTCAAGAGTTCCATTTAATGGAAATAAAACGGTATAATTAATAA
TTCTCTAGGGGGGAAAAATGAAGCAAATCTCATTGGATATTTTTAAAGGTCTCCA
CAGAGTTTATGCCATATTGGAATTTTGTGTATAATTCTCNGCGAATTC

10

SEQ ID NO: 279

>gi|181244|gb|M64349.1|HUMCYCD1 Human cyclin D (cyclin D1) mRNA, complete cds
GCAGTAGCAGCGAGCAGCAGAGTCCGCACGCTCCGGCGAGGGGCAGAAGAGCG
CGAGGGAGCGCGGGGCAGCAGAAGCGAGAGCCGAGCGCGGACCCAGCCAGGAC
15 CCACAGCCCTCCCCAGCTGCCCAGGAAGAGCCCCAGCCATGGAACACCAGCTCC
TGTGCTGCGAAGTGGAAACCATCCGCCGCGCGTACCCCGATGCCAACCTCCTCAA
CGACCGGGTGCTGCGGGCCATGCTGAAGGCGGAGGAGACCTGCGCGCCCTCGGT
GTCCTACTTCAAATGTGTGCAGAAGGAGGTCCTGCCGTCCATGCGGAAGATCGTC
GCCACCTGGATGCTGGAGGTCTGCGAGGAACAGAAGTGCAGAGGAGGAGGTCTTC
20 CCGCTGGCCATGAACTACCTGGACCGCTTCCTGTGCTGGAGCCCGTGAAAAAGA
GCCGCCTGCAGCTGCTGGGGGCCACTTGCATGTTTCGTGGCCTCTAAGATGAAGGA
GACCATCCCCCTGACGGCCGAGAAGCTGTGCATCTACACCGACGGCTCCATCCGG
CCCGAGGAGCTGCTGCAAATGGAGCTGCTCCTGGTGAACAAGCTCAAGTGGAAAC
CTGGCCGCAATGACCCCGCACGATTTCAATTGAACACTTCCTCTCCAAAATGCCAG
25 AGGEGGAGGAGAAACAAACAGATCATCCGCAAACACGCGCAGACCTTCGTTGCCT
CTTGTGCCACAGATGTGAAGTTCATTTCCAATCCGCCCTCCATGGTGGCAGCGGG
GAGCGTGGTGGCCGAGTGCAAGGCCTGAACCTGAGGAGCCCCAACAACTTCCT
GTCCTACTACCGCCTCACACGCTTCCTCTCCAGAGTGATCAAGTGTGACCCAGAC
TGCTCCGGGCCTGCCAGGAGCAGATCGAAGCCCTGCTGGAGTCAAGCCTGCGC
30 CAGGCCCAGCAGAACATGGACCCCAAGGCCGCCGAGGAGGAGGAAGAGGAGGA
GGAGGAGGTGGACCTGGCTTGACACCCACCGACGTGCGGGACGTGGACATCTG
AGGGGCCCAGGCAGGCGGGCGCCACCGCCACCCGCAGCGAGGGCGGAGCCGGC
CCCAGGTGCTCCACATGACAGTCCCTCCTCTCCGGAGCATTTTGATAACCAGAAGG
GAAAGCTTCATTCTCCTTGTGTGTTGGTTGTTTTTCTTTTGCTCTTTCCCCCTTCCA
35 TCTCTGACTTAAGCAAAAGAAAAAGATTACCAAAAACTGTCTTTAAAGAGAG
AGAGAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAA
AAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAA

SEQ ID NO: 280

>gi|3004498|gb|U04357.1|HSU04357 Homo sapiens arginine vasopressin receptor type II,
V2 antidiuretic hormone receptor (AVPR2) gene, complete cds
CTTGCTCCTCAGGCAGAGGCTGAGTCCGCACATCACCTCCAGGCCCTCAGAACAC
CTGCCCCAGCCCCACCATGCTCATGGCGTCCACCACTCCGGTAAGGCTTGCCCC
TCCATGAGTCCGGTGGGCAGAGTGGGTTTGACGATTCAGGGAAGCCCCCTCTTTCT
45 AAAGACCTCCTTCACCCTCACCTCTGGGTGTGTCTCTCCAGGCTGCCAATGAGTG
GGGAGGGGAGCACAGCCCCACTTCCCCGCCAGGGCTGGGGCTGGGGCTGGGGCT
GGGGCTGCCCTTCCTTCTGGACTGCATGAGCCTGGGGTGTGTATCCCTCATAACA
TGGCTTTCCTGGAGTCCCCTCTGCTAGGAGCCAGGAAGTGGGTGTCCGGATGGGG
GCACGGGAGGCAGGCCTGAGTCCCCCTGCACAGCACCTCTCTAACCAGGCCCTC

TTCCCGACTCCTGCCCAGCTGTGCCTGGGCATCCCTCTCTGCCCAGCCTGCCCAGC
 AACAGCAGCCAGGAGAGGGCCACTGGACACCCGGGACCCGCTGCTAGCCCGGGCG
 GAGCTGGCGCTGCTCTCCATAGTCTTTGTGGCTGTGGCCCTGAGCAATGGCCTGG
 TGCTGGCGGCCCTAGCTCGGCGGGGGCCGCGGGGGCCACTGGGCACCCATACACG
 5 TCTTCATTGGCCACTTGTGCCTGGCCGACCTGGCCGTGGCTCTGTTCCAAGTGCTG
 CCCCAGCTGGCCTGGAAGGCCACCGACCGCTTCCGTGGGCCAGATGCCCTGTGTC
 GGGCCGTGAAGTATCTGCAGATGGTGGGCATGTATGCCTCCTCCTACATGATCCT
 GGCCATGACGCTGGACCGCCACCGTGCCATCTGCCGTCCCATGCTGGCGTACCGC
 CATGGAAGTGGGGCTCACTGGAACCGGGCCGGTGCTAGTGGCTTGGGCCTTCTCGC
 10 TCCTTCTCAGCCTGCCCCAGCTCTTCATCTTCGCCCAGCGCAACGTGGAAGGTGG
 CAGCGGGGTCACTGACTGCTGGGCCTGCTTTGCGGAGCCCTGGGGCCGTGCGACC
 TATGTCACCTGGATTGCCCTGATGGTGTTCGTGGCACCTACCCTGGGTATCGCCG
 CCTGCCAGGTGCTCATCTTCCGGGAGATTTCATGCCAGTCTGGTGCCAGGGGCCATC
 AGAGAGGCCTGGGGGGCGCCGCAGGGGACGCCGACAGGCAGCCCCGGTGAGG
 15 GAGCCACAGTGTGAGCAGCTGTGGCCAAGACTGTGAGGATGACGCTAGTGATTG
 TGGTCGTCTATGTGCTGTGCTGGGCACCCTTCTTCCTGGTGCAGCTGTGGGCCGC
 GTGGGACCCGGAGGCACCTCTGGAAGGTGGGTGTAGCCGTGGCTAGGGCTGACG
 GGGCCACTTGGGCTTGGCCGCATGCCCTGTGCCCCACCAGCCATCCTGAACCCA
 ACCTAGATCCTCCACCTCCACAGGGGGCGCCCTTTGTGCTACTCATGTTGCTGGCC
 20 AGCCTCAACAGCTGCACCAACCCCTGGATCTATGCATCTTTCAGCAGCAGCGTGT
 CCTCAGAGCTGCGAAGCTTGCTCTGCTGTGCCCGGGGACGCACCCCAACCCAGCCT
 GGGTCCCCAAGATGAGTCCTGCACCAACCGCCAGCTCCTCCCTGGCCAAGGACACT
 TCATCGTGAGGAGCTGTTGGGTGTCTTGCCTCTAGAGGCTTTGAGAAGCTCAGCT
 GCCTTCCCTGGGGCTGGTCCTGGGAGCCACTGGGAGGGGGACCCGTGGAGAATTG
 25 GCCAGAGCCTGTGGCCCCGAGGCTGGGACACTGTGTGGCCCTGGACAAGCCACA
 GCCCCTGCCTGGGTCTCCACATCCCCAGCTGTATGAGGAGAGCTTCAGGCCCCAG
 GACTGTGGGGGGCCCTCAGGTCAGCTCACTGAGCTGGGTGTAGGAGGGGGCTGCA
 GCAGAGGCCTGAGGAGTGGCAGGAAAGAGGGAGCAGGTGCCCCCAGGTGAGAC
 AGCGGTCCCAGGGGCCTGAAAAGGAAGGACCAGGCTGGGGCCAGGGGACCTTCC
 30 TGTCTCCGCCTTTCTAATCCCTCCCTCCTCATTCTCTCCCTAATAAAAATTGGAGC
 TCA

SEQ ID NO: 281

>4161733H1

35 CAGCACCATCGCAACCAGTGCCAGTACTGCCGCCTCAAAAAGTGCCTCAAAGTG
 GGCATGAGACGGGAAGGTATCGGCCTCTCATTTCTCCTTCCCTCGTCCTGGGTCC
 CGGGGTCTTGGGTACGTTTGGCTAGCCTGCTCTGGGTAAGGACAAGAAGCCCCA
 AGCTCTTCTCTTCGTATTGCAGCGGAAAAGGGTTTTATACTAGAAGCGAGTTCTG
 CATTGGAACCCAGACCCCAAATCCGCATGCTTT

40

SEQ ID NO: 282

>gi|183866|gb|M60278.1|HUMHBEGF Human heparin-binding EGF-like growth factor
 mRNA, complete cds

45 GCTACGCGGGGCCACGCTGCTGGCTGGCCTGACCTAGGCGCGCGGGGTCTGGGCGG
 CCGCGCGGGCGGGCTGAGTGAGCAAGACAAGACACTCAAGAAGAGCGAGCTGC
 GCCTGGGTCCCGGCCAGGCTTGACGCGAGAGGCGGGCGGCAGACGGTGCCCCGGC
 GGAATCTCCTGAGCTCCGCGCGCCAGCTCTGGTGCCAGCGCCCAAGTGGCCGCCGC
 TTCGAAAGTGACTGGTGCCTCGCCGCCTCCTCTCGGTGCGGGACCATGAAGCTGC
 TGCCGTGCGGTGGTGCTGAAGCTCTTCTGGCTGCAGTTCTCTCGGCACCTGGTGACT

GGCGAGAGCCTGGAGCGGCTTCGGAGAGGGCTAGCTGCTGGAACCAGCAACCCG
GACCCTCCCACTGTATCCACGGACCAGCTGCTACCCCTAGGAGGCGGCCGGGAC
CGGAAAGTCCGTGACTTGCAAGAGGCAGATCTGGACCTTTTGAGAGTCACTTTAT
CCTCCAAGCCACAAGCACTGGCCACACCAAACAAGGAGGAGCACGGGAAAAGA
5 AAGAAGAAAGGCAAGGGGGCTAGGGAAGAAGAGGGACCCATGTCTTCGGAAATA
CAAGGACTTCTGCATCCATGGAGAATGCAAATATGTGAAGGAGCTCCGGGCTCC
CTCCTGCATCTGCCACCCGGGTACCATGGAGAGAGGTGTCATGGGCTGAGCCTC
CCAGTGGAATAATCGCTTATATACCTATGACCACACAACCATCCTGGCCGTGGTGG
CTGTGGTGCTGTCATCTGTCTGTCTGCTGGTCATCGTGGGGCTTCTCATGTTAGG
10 TACCATAGGAGAGGAGGTTATGATGTGGAAAATGAAGAGAAAGTGAAGTTGGGC
ATGACTAATTCCCACTGAGAGAGACTTGTGCTCAAGGAATCGGCTGGGGACTGCT
ACCTCTGAGAAGACACAAGGTGATTTCAAGACTGCAGAGGGGAAAGACTTCCATC
TAGTCACAAAGACTCCTTCGTCCCCAGTTGCCGTCTAGGATTGGGCTCCCATAA
TTGCTTTGCCAAAATACCAGAGCCTTCAAGTGCCAAACAGAGTATGTCCGATGGT
15 ATCTGGGTAAGAAGAAAGCAAAAGCAAGGGACCTTCATGCCCTTCTGATTCCTCCT
CCACCAAACCCCACTTCCCCTCATAAGTTTGTAAACACTTATCTTCTGGATTAG
AATGCCGGTTAAATTCCATATGCTCCAGGATCTTTGACTGAAAAAAAAAAGAA
GAAGAAGAAGGAGAGCAAGAAGGAAAGATTTGTGAAGTGAAGAAAGCAACAA
AGATTGAGAAGCCATGTACTCAAGTACCACCAAGGGATCTGCCATTGGGACCT
20 CCAGTGCTGGATTTGATGAGTTAACTGTGAAATACCACAAGCCTGAGAAGTGAAT
TTTGGGACTTCTACCCAGATGGAAAAATAACAACACTATTTTTGTTGTTGTTGTTGT
AAATGCCTCTTAAATTATATATTTATTTATTTCTATGTATGTTAATTTATTTAGTTT
TTAACAATCTAACAATAATATTTCAAGTGCCTAGACTGTTACTTTGGCAATTTCCCT
GGCCCTCCACTCCTCATCCCCACAATCTGGCTTAGTGCCACCCACCTTTGCCACA
25 AAGCTAGGATGGTTCTGTGACCCATCTGTAGTAATTTATTGTCTGTCTACATTTCT
GCAGATCTTCCGTGGTCAGAGTGCCACTGCGGGAGCTCTGTATGGTCAGGATGTA
GGGGTTAACTTGGTCAGAGCCACTCTATGAGTTGGACTTCAGTCTTGCCTAGGCG
ATTTTGTCTACCATTTGTGTTTTGAAAGCCCAAGGTGCTGATGTCAAAGTGTAAC
AGATATCAGTGTCTCCCCGTGTCCTCTCCCTGCCAAGTCTCAGAAGAGGTTGGGC
30 TTCCATGCCTGTAGCTTTCCTGGTCCCTCACCCCATGGCCCCAGGCCACAGCGT
GGGAACCTCACTTTCCTTGTGTCAAGACATTTCTCTAACTCCTGCCATTCTTCTGG
TGCTACTCCATGCAGGGGTCAGTGCAGCAGAGGACAGTCTGGAGAAGGTATTAG
CAAAGCAAAAGGCTGAGAAGGAACAGGGAACATTGGAGCTGACTGTTCTTGGTA
ACTGATTACCTGCCAATTGCTACCGAGAAGGTTGGAGGTGGGGAAGGCTTTGTAT
35 AATCCCACCCACCTCACCAAAACGATGAAGGTATGCTGTCTATGGTCTTTCTGGA
AGTTTCTGGTGCCATTTCTGAACTGTTACAACCTTGTATTTCCAAACCTGGTTCATA
TTTATACTTTGCAATCCAAATAAAGATAACCCTTATTCCATAAAAAAAAAAAAAA
AAAA

40 SEQ ID NO: 283

>gi|35039|emb|X61498.1|HSNFKBS H.sapiens mRNA for NF-kB subunit

ACTTTCCTGCCCCCTTCCCCGGCCAAGCCCAACTCCGGATCTCGCTCTCCACCGGAT
CTCACCCGCCACACCCGGACAGGCGGCTGGAGGAGGCGGGCGTCTAAAATTCTG
GGAAGCAGAACCTGGCCGGAGCCACTAGACAGAGCCGGGCCTAGCCCAGAGAC
45 ATGGAGAGTTGCTACAACCCAGGTCTGGATGGTATTATTGAATATGATGATTTC
AATTGAACTCCTCCATTGTGGAACCCAAGGAGCCAGCCCCAGAAACAGCTGATG
GCCCTACCTGGTGATCGTGGAACAGCCTAAGCAGAGAGGCTTCCGATTTGATA
TGGCTGTGAAGGCCCTCCATGGAGGACTGCCCGGTGCCTCCAGTGAGAAGGG
CCGAAAGACCTATCCCACTGTCAAGATCTGTAACACGAGGGACCAGCCAAGAT

CGAGGTGGACCTGGTAACACACAGTGACCCACCTCGTGCTCATGCCCACAGTCTG
GTGGGCAAGCAATGCTCGGAGCTGGGGATCTGCGCCGTTTCTGTGGGGCCCAAG
GACATGACTGCCCAATTTAACAACCTGGGTGTCCTGCATGTGACTAAGAAGAAC
ATGATGGGGACTATGATACAAAACTTCAGAGGCAGCGGCTCCGCTCTAGGCCC
5 CAGGGCCTTACGGAGGCCGAGCAGCGGGAGCTGGAGCAAGAGGCCAAAGAAGT
GAAGAAGGTGATGGATCTGAGTATAGTGCGGCTGCGCTTCTCTGCCTTCCTTAGA
GCCAGTGATGGCTCCTTCTCCCTGCCCCCTGAAGCCAGTCACCTCCCAGCCCATCC
ATGATAGCAAATCTCCGGGGGCATCAAACCTGAAGATTTCTCGAATGGACAAGA
CAGCAGGCTCTGTGCGGGGTGGAGATGAAGTTTATCTGCTTTGTGACAAGGTGCA
10 GAAAGATGACATTGAGGTTTCGGTTCTATGAGGATGATGAGAATGGATGGCAGGC
CTTTGGGGACTTCTCTCCACAGATGTGCATAAACAGTATGCCATTGTGTTCCGG
ACACCCCCCTATCACAAGATGAAGATTGAGCGGCCTGTAAACAGTGTTTCTGCAAC
TGAAACGCAAGCGAGGAGGGGACGTGTCTGATTCCAAACAGTTCACCTATTACC
CTCTGGTGGAAAGACAAGGAAGAGGTGCAGCGGAAGCGGAGGAAGGCCTTGCCC
15 ACCTTCTCCCAGCCCTTCGGGGGTGGCTCCCACATGGGTGGAGGCTCTGGGGGTG
CAGCCGGGGGCTACGGAGGAGCTGGAGGAGGTGGCAGCCTCGGTTTCTTCCCCT
CCTCCCTGGCCTACAGCCCCTACCAGTCCGGCGCGGGCCCCATGCGGTGCTACCC
GGGAGGCGGGGGCGGGGCGCAGATGGCCGCCACGGTGCCCAGCAGGGACTCCG
GGGAGGAAGCCGCGGAGCCGAGCGCCCCCTCCAGGACCCCCCAGTGCGAGCCGC
20 AGGCCCCGGAGATGCTGCAGCGAGCTCGAGAGTACAACGCGCGCCTGTTCCGGCC
TGGCGCACGCAGCCCCGAGCCCTACTCGACTACTGCGTCACCGCGGACGCCGCG
CGCTGCTGGCGGGACAGCGCCACCTGCTGACGGCGCAGGACGAGAACGGAGACA
CAGCACTGCACCTAGCCATCATCCACGGGCAGACCAGTGTCAATTGAGCAGATAGT
CTATGTCATCCACCACGCGCAGGACCTCGGCGTTGTCAACCTCACCAACCACCTG
25 CACCAGACGCCCTGCACCTGGCGGTGATCACGGGGCAGACGAGTGTGGTGAGC
TTTCTGCTGCGGGTAGGTGCAGACCCAGCTCTGCTGGATCGGCATGGAGACTCAG
CCATGCATCTGGCGCTGCGGGCAGGCGCTGGTGCTCCTGAGCTGCTGCGTGCAT
GCTTCAGAGTGGAGCTCCTGCTGTGCCCCAGCTGTTGCATATGCCTGACTTTGAG
GGACTGTATCCAGTACACCTGGCGGTCCGAGCCCGAAGCCCTGAGTGCCTGGATC
30 TGCTGGTGGACAGTGGGGCTGAAGTGGAGGCCACAGAGCGGCAGGGGGGACGA
ACAGCCTTGATCTAGCCACAGAGATGGAGGAGCTGGGGTTGGTCACCCATCTG
GTCACCAAGCTCCGGGGCCAACGTGAACGCTCGCACCTTTGCGGGAAACACACCC
CTGCACCTGGCAGCTGGACTGGGGTACCCGACCCTCACCCGCCTCCTTCTGAAGG
CTGGTGCTGACATCCATGCTGAAAACGAGGAGCCCCTGTGCCCACTGCCTTCACC
35 CCCTACCTCTGATAGCGACTCGGACTCTGAAGGGCCTGAGAAGGACACCCGAAG
CAGCTTCCGGGGGCCACACGCCTCTTGACCTCACTTGCAGCACCTTGGTGAAGACC
TTGCTGCTAAATGCTGCTCAGAACACCATGGAGCCACCCCTGACCCCGCCAGCC
CAGCAGGGCCGGGACTGTCACTTGGTGATACAGCTCTGCAGAACCTGGAGCAGC
TGCTAGACGGGCCAGAAGCCCAGGGCAGCTGGGCAGAGCTGGCAGAGCGTCTGG
40 GGCTGCGCAGCCTGGTAGACACGTACCGACAGACAACCTCACCCAGTGGCAGCC
TCCTGCGCAGCTACGAGCTGGCTGGCGGGGACCTGGCAGGTCTACTGGAGGCCC
TGTCTGACATGGGCCTAGAGGAGGGAGTGAGGCTGCTGAGGGGTCCAGAAACCC
GAGACAAGCTGCCCAGCACAGAGGTGAAGGAAGACAGTGCGTACGGGAGCCAG
TCAGTGGAGCAGGAGGCAGAGAAGCTGGGCCCCACCCCTGAGCCACCAGGAGG
45 GCTCTCGCACGGGCACCCCCAGCCTCAGGTGACTGACCTGCTGCCTGCCCCCAGC
CCCCCTCCCGGACCCCCCTGTACAGCGTCCCCACCTATTTCAAATCTTATTTAACAC
CCCACACCCACCCCTCAGTTGGGACAAATAAAGGATTCTCATGGGAAGGGGAGG
ACCCCGAATTCCT

SEQ ID NO: 284

>gi|183537|gb|M37724.1|HUMGPLEU02 Human MDR1/P-glycoprotein gene, exon 7

GCCATAAACTACCCTACACTCAAAACAGGCTTCACGAGAAAAGTTGATGTTTAAC
ATTCTGACAATTATTTCTAACACTATCTGTTCTTTTCAGTGATGTCTCCAAGATTAA
5 TGAAGGAATTGGTGACAAAATTGGAATGTTCTTTTCAGTCAATGGCAACATTTTTC
ACTGGGTTTATAGTAGGATTTACACGTGGTTGGAAGCTAACCC

SEQ ID NO: 285

>1322305T6

10 GTGAGTTACACTTCTTCTCTCCCAACCAGGTGCTCTCTGCAGCTCTGGAAAAATGG
TGTCCTCTTTGTTGTCCCAACCAGGGGGCGCCACCTCCAGCCCCGCCCGAGCCTCA
TACCCAGTTCTTCAGCTCGGCCAGCGGTAACCTGAAGCCTCCCAGAATCCTGGATC
CGGGCCCCTAGTACCCTCTTTCCCAGGGACCCAGGAGTCCTGCCTCCAGTCGCCT
GCACTTGTAACCTGAGAGCTGGAGGTTCGTCCATAGCAGCATAGTGAGAGTGTTTTT
15 GATGAGGGTATGCAGAGTGGGGGTGACCATGTTCCCACCTGGGGCCTCAGGTGG
GCCAAGGCCTACCCACTTTAGCCAGCGTCCCCTCCAGCAGCCATCAGCAAGCCAA
CCCCTCCAAGCCAGGGCCCCCTTTGGTCCTTGCACTTGAGGTGCTTTGTTTCAGG
GCTGGGTCAGGAGTGGCAGAGACGATGTCCAACAACCTCAGTACTGGGGGAAAA
GTAGCCTGG
20

SEQ ID NO: 286

>1284795H1

GTGTGAGAAGACTGGCTAGTGTGGAAGCATAGTGAACACACTGATTAGGTTATG.
GTTTAATGTTACAACAACCTATTTTTTAAGAAAAACAAGTTTTAGAAATTTGGTTTC
25 AAGTGTACATGTGTGAAAACAATATTGTATACTACCATAGTGAGCCATGA

SEQ ID NO: 287

>349590H1

GTTGGCTGGATGGGTCTTATCAAAAGCAAAGAAAGATGACATGGATGAGGAAAT
30 TTCAATATACGATGGAAGATGGGAAATTGAAGAGTTGAAAGAAAACCAGGTACC
TGGTGACAGAGGACTGGTATTAATAATCTAGAGCAAAGCATCATGCAATATCTGC
TGTATTAGCAAAACCATTCATTTTTTGCTGATAAACCCCTTGNTAGTTCAATATGAA
GTAAATTTTCAAGATGGTATTGATTGTGGAGGTGCATACATTAACTCCTAG

35 SEQ ID NO: 288

>gi|181075|gb|M28638.1|HUMCRYABA Human alpha-B-crystallin gene, 5' end

GTCGACACCACCCAAAATAGTGCCGAGCCTCTTGGGGGGGGAGGGGCTGGGAGT
GGGGGCCCTGAGTGAGAGCAACGAGGGTGTGACCAGCGCCGCCCGGACCCCTAG
TCCCCTCCCCCGCACACTCTTCAGCTGTCGCAGGGGGCCTGAGAGGACAGCTGAG
40 GGTCTTGGCTGGGAACGAGCTGGGGAGGGGGAGCTGGTGGTGCCTGGGGCATGA
AGAGGCCTCGCTGAGACCCTCACAAACGGTTTGCACGTTTCCACACCTCATTTC
TCCTCTTCGGTGGCAGGCACTGTGCACCCAATTCTAAAGCACTCCTGGATTAA
TGTTCTGAGAGCCACATAGAACGAAAGATGCAAGAAATCTGTTTGCTCTTTTTTC
AGGGGGTGGGGTCTTTCTGCCAGATGTGGGATCCTCTCCTAAACCCAGGTCAAC
45 CCAGGGCACGAGGCAGATGGCTGGTGTGACATGTTGACCATCACTGCTCTCTTC
CAAGGACTCACAAAGAGTTAATGTCCCTGGGGCTCAGCCTAGGAAGATTCCAGT
CCCTGCCCAGGCCCAAGATAGTTGCTGGCCTGATTCCCCTGGCATTTCAGGACTGG
AAAGGAGGAGGAGGGGCACACTACGCCGGCTCCCATCCTCCCCCACCCTCGCT
GCCTGCTTGGGATTCCTGACTCTGTACCAGCTTCAGAGAACAGGGGTGGGGGTGG

GTGCCATTGGGTGTGGACAGAAAGCTAGTGAAACAAGACCATGACAAGTCACTG
GCCGGCTCAGACGTGTTTGTGTCTCTCTTTTCTTAGCTCAGTGAGTACTGGGTATG
TGTCACATTGCCAAATCCCGGATCACAAGTCTCCATGAACTGCTGGTGAGCTAGG
ATAATAAAACCCCTGACATCACCATTCCAGAAGCTTCACAAGACTGCATATATAA
5 GGGGCTGGCTGTAGCTGCAGCTGAAGGAGCTGACCAGCCAGCTGACCCCTCACA
CTCACCTAGCCACCATGGACATCGCCATCCACCACCCCTGGATCCGCCGCCCTT
CTTTCCTTTCCACTCCCCAGCCGCCTCTTTGACCAGTTCTTCGGAGAGCACCTGT
TGGAGTCTGATCTTTTCCCGACGTCTACTTCCCTGAGTCCCTTCTACCTTCGGCCA
CCCTCCTTCCCTGCGGGCACCCAGCTGGTTTGACACTGGACTCTCAGAGGTGAGTC
10 TCCCCACAGCTAGGACGGGAGAGTCTTACTGGAACCTCCTGGAACTTCTCCAT
CCATTTTCTTTTCTACCTGCCTAAACCATTTTAGGCACATGTGTGTCCAAATGT
GAAGAAAAATGAGGAGGTTGCTAGTGCCTTCCCTCCCCCATCACCTGTTTCTATTT
GATAGTCCTCTGTATCCCATTTATTACATTTTTTTCATGCACTGTCAAGTTTATCCTC
CGTCCCCTAACTTCTCTACAGGATACCCCTTTCTGGTTTGGTTCATGACAATCTGC
15 AGGGAAAGAGCTGCCTTCAAACCTCTTTGCTTATCTCTTCCAACACCTTGGACTCT
TGACCGATTTTACCATCTCAGGTTTCAGAGCCAGGAGAGAGCCCTGCCTCATCT
GAGCTGTTTCATCCCCATGGGTATTTTCTGCCTTTCTATTCCCTCTTCTATGATTTTC
TGGGTTTCTCAGGGCTACGACAGGGCGCTGGCCTGGGTCCAATCAAGCCCTACGA
GGAAACAATATAGGGACGCCCATTTGTCCTAAGAGGGTGGAAGAACAGGGTGAA
20 CAAATAAGGTTGACAGAGCTGTCACAGATAACACTCTGGTTTAAAAATATTCAA
GTGTGAGTAAACAGGAGCTGAGTGGGCAAGGGCTTTGGAAGGACAAGCAGGAC
CAGCAGAACATTCCAGATTGGGTGGGTGGAAAACCTGGCAAAGAGACCTGAGCCA
GAAAGAAGAGGCCTTTGTCTCACAGACAAACCACAAGCCAGGCATTGGAGTCAG
AGAGGCAGCAGATGCCAGGCTTGACCCATCCTTGCGACTGGTCCCCTGGGTGAT
25 CTGTCTTCTTCTCTGTCCCTGTAAATAAAGTTTGGGTCTGATCACCATGAGCCTTA
GGTATCACTGTGGTGGCTCCCTGAAGCAGACAGCTATGTTTATTTAAAAAGGAGA
TTTTTTAAGCAGAGAAGAGAAGGATGAATTACCCGGACAGAAAGCAGCTCTGCA
GAATAAGACAGCACCTGTGTAATCAGTATTTTTGCCCTCTTCTCCCATCCCATT
CCTTACCTTGCTATTTCTAGATGCGCTGGAGAAGGACAGGTTCTCTGTCAACCT
30 GGATGTGAAGCACTTCTCCCCAGAGGAACTCAAAGTTAAGGTGTTGGGAGATGT
GATTGAGGTGCATGGAAAACATGAAGAGCGCCAGGTATGTAGCTTGTTTTTTGT
TTTCTGCTCATTCAATCAGTGATACTGTAATAGTCCAGGTAGTGCTATCAGCTTTG
GAGGCTGGCTACATTCCAGTCCCAAGCCATAACAGTCGGGATCAGGGGTTACAA
ATCAATGTCTAGAAGACTAAGTTAGGATAGACATATTGCTGTTGTTACTATTATG
35 GCCAGAGATGTGGCCTTTGATTTGATCGCCTTAGATGGGATGATGGGATGCTGAT
GCCCCATTTAAGCCAGTGGTTCTGAATCTGGGCCACATTAGAATCACCAGGGGAA
CTTTCAAAAACCTAATGCTCGGGCATCCTCCAGACCAATTAGCATATGTGCTGCC
GAAGCGAGCACTACTCCAGACCAATTAAATCAGCATTTTTTAAGGGTGGGACCCA
GGCATCAGCAATTTTTAAGGTAATTCTAATCTACAGTCAAGGTTGAGAACCACTG
40 ATTAGGTATAGGGCTGTCAGACACCTAGTTGCTTTGCATAATTACATTAACCTACA
GGTACCCTAAAAGCACTTGAGTTGTGACTTCTCTTTTAGCTGTGCAAGAATCCGT
GTCTCTTCTTTAGCCCATCTTAATGCTGAACTACTTGGTTTGTCTAAATTTTCAGAG
CTGTGCTCAGTCTTTAATCCCCTACAGCCCATGTGGTAATCAGTTAACGAGAGCC
TGTTTGGCTACATGCTTGAGAGTCAGCAGGCATACGGGTAAAGGTCATCTACTCT
45 TTGGGGGAGTTCTGACAAATGGAACAGCTTGTTATGACTTTATAAGAGGGCTTTA
AAATTGCTTCTCACCATTTAACGATAGCTCAGAACCTGTGCGTCAACCAGTACAG
TTTGTCTCAGTAATGTCCTCAGGCTGTTTCAATTTTGCTTATATGATTAGGTTT
GGGTCATAGTCTCCTTGGATGGAGTCATTTTTTTTTTTTTTAATTCAGCAGCAG
TCCTATTGTTCTGGAACCTTCTGGGACATTCCTGAAGAGTCAGGACAATTCAGG

GCTTCCTCAGGGACTCAGATTCTAAATGAGATTCCAAATTCTGTAGGCCAGCCA
ACATTGATCTAAACCTTTGGGAAATACCCCTAAACATATCTATGCCTCAGGGTTT
GAAAAACAATGAAGTGTTGGACTGTTTCAGACTTCTCAGATTCTCACTGGTAGGA
GTGACTACCTAGGCAATTTTCATCTTAGCTGCAACCCTGAAACGAAGCTCTATTTA
5 TTTTTCCTATGTTGTCATGGCATTGTTGTTCTCACCTAAGGGGAAATCAGGATGCCTG
AGTTCTGGGCAGGTGATAATAGTTCCTGTTCTTATCTCTCTGCCTCTTTCCTCATT
CTTTTGGGTTAGGATGAACATGGTTTCATCTCCAGGGAGTTCCACAGGAAATACC
GGATCCCAGCTGATGTAGACCCTCTCACCATTACTTCATCCCTGTCATCTGATGG
GGTCCTCACTGTGAATGGACCAAGGAAACAGGTCTCTGGCCCTGAGCGCACCATT
10 CCCATCACCCGTGAAGAGAAGCCTGCTGTCACCGCAGCCCCCAAGAAATAGATG
CCCTTTCTTGAATTGCATTTTTTAAAACAAGAAAGTTCCCCACCAGTGAATGAA
AGTCTTGTGACTAGTGCTGAAGCTTATTAATGCTAAGGGCAGGCCCAAATTATCA
AGCTAATAAAATATCATTACAGCAACAGATAACTGTCTTGTGTTTGAATATTCCAC
ACACTTTTAAATAAATATACAGATACCACAGATCTATTTATGATTGCATTATGAT
15 TTAGAGGGCTCCAAGGATTTAGAGT

SEQ ID NO: 289

>gi|1398343|gb|W85914.1|W85914 zh52c10.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:415698 3', mRNA sequence

20 TTGTAAATGTAGACAGTTTAAATTGTAGTATCAGAAACTGGTGGGGAGGAAACA
AATTGTGGTATATTCATACAATGGAAAACCTTTCAGAAATAAGAAGGAACAAAC
CACTGAATCACACAACATGGACAAATCTCAAATCATTATGCTGATGGAAAGAAA
CCATTTCATAAGAATACACAGTACATGACGCCGCTTTCATGATGTTCTGGAACAAA
GAAAACCTAACCTATAGTGATAGAATTCCTATCAATGGCTGCCAACAATCGGGAG
25 TGAAAGGAACTGACTGAGCAGGTATACAAGAGAACCTTCTGGGGTGATGGAAAT
ATTCTGAAGCTTACTGGAGTGTTGGTTACATGGGTATATCNATTTATCAAACT
CACTGAATTGTATATTAAAGTAGGAACATTTTATTGTAAATAAATTACCCNCTA
TAATGTTCTGTTTTAAAAATATTAGATACANCGCTGGAAANCCCTGGGTTTACAAA
AAAT

30

SEQ ID NO: 290

>3526532H1

GGTACTCAACACTGAGCAGATCTGTTCTTTGAGCTAANAACCATGTGCTGTACCA
AGAGTTTGCTCCTGGCTGCTTTGATGTGCTGCTACTCCACCTCTGCGGCGA
35 ATCAGAAGCAAGCAACTTTGACTGCTGTCTTGGATACACAGACCGTATTCTTCAT
CCTAAATTTATTGTGGGCTTCACACGGCAGCTGGCCAATGAAGGCTGTGACATCA
ATGCTATGATCTTTCACACAAAGAACAAGTTGTCTGTGTGCGCA

SEQ ID NO: 291

40 >gi|186351|gb|M54894.1|HUMIL6CSF Human interleukin 6 mRNA, complete cds
GAATTCGGGAACGAAAGAGAAGCTCTATCTCCCTCCAGGAGCCCAGCTATGA
ACTCCTTCTCCACAAGCGCCTTCGGTCCAGTTGCCTTCTCCCTGGGGCTGCTCCTG
GTGTTGCCTGCTGCCTTCCCTGCCCCAGTACCCCCAGGAGAAGATTCCAAAGATG
TAGCCGCCCCACACAGACAGCCACTCACCTCTTCAGAACGAATTGACAAACAAA
45 TTCGGTACATCCTCGACGGCATCTCAGCCCTGAGAAAGGAGACATGTAACAAGA
GTAACATGTGTGAAAGCAGCAAAGAGGCACTGGCAGAAAACAACCTGAACCTTC
CAAAGATGGCTGAAAAAGATGGATGCTTCCAATCTGGATTCAATGAGGAGACTT
GCCTGGTGAAATCATCACTGGTCTTTTGGAGTTTGAGGTATACCTAGAGTACCT
CCAGAACAGATTTGAGAGTAGTGAGGAACAAGCCAGAGCTGTGCAGATGAGTAC

AAAAGTCCTGATCCAGTTCCTGCAGAAAAAGGCCAAAGAATCTAGATGCAATAAC
 CACCCCTGACCCAACCAAAATGCCAGCCTGCTGACGAAGCTGCAGGCACAGAA
 CCAGTGGCTGCAGGACATGACAACTCATCTCATTCTGCGCAGCTTTAAGGAGTTC
 CTGCAGTCCAGCCTGAGGGCTCTTCGGCAAATGTAGCATGGGCACCTCAGATTGT
 5 TGTGTGTTAATGGGCATTCTCTTCTTCTGGTCAGAAACCTGTCCACTGGGCACAGAA
 CTTATGTTGTTCTCTATGGAGAACTAAAAGTATGAGCGTTAGGACACTATTTTAA
 TTATTTTAAATTTATTAATATTTAAATATGTGAAGCTGAGTTAATTTATGTAAGTC
 ATATTTATATTTTAAAGAAGTACCACTTGAAACATTTTATGTATTAGTTTGAAT
 AATAATGGAAAGTGGCTATGCAGTTTGAATATCCTTTGTTTCAGAGCCAGATCAT
 10 TTCTTGGAAAGTGTAGGCTTACCTCAAATAAATGGCTAACTTATACATATTTTAA
 AAGAAATATTTATATTGTATTTATATAATGTATAAATGGTTTTTATACCAATAAAT
 GGCATTTTAAAAAATTC

SEQ ID NO: 292

15 >14611 BLOOD Hs.82109 gnl|UG|Hs#S269762 H.sapiens syndecan-1 gene (exons 2-5)
 /cds=(0,866) /gb=Z48199 /gi=666051 /ug=Hs.82109 /len=2802
 CAAATTGTGGCTACTAATTTGCCCCCTGAAGATCAAGATGGCTCTGGGGATGACT
 CTGACAACCTTCTCCGGCTCAGGTGCAGGTGCTTTGCAAGATATCACCTTGTGACA
 GCAGACCCCTCCACTTGAAGGACACGCAGCTCCTGACGGCTATTCCCACGTCT
 20 CCAGAACCCACCGGCCTGGAGGCTACAGCTGCCTCCACCTCCACCCTGCCGGCTG
 GAGAGGGGGCCCAAGGAGGGAGAGGCTGTAGTCCTGCCAGAAGTGGAGCCTGGC
 CTCACCGCCCCGGGAGCAGGAGGGCCACCCCCCGACCCAGGGAGACACACAGCTC
 CCGACCACTCATCAGGCCTCAACGACCACAGCCACCACGGCCCAGGAGCCCGCC
 ACCTGCCACCCCCACAGGGACATGCAGCCTGGCCACCATGAGACCTCAACCCCTG
 25 CAGGACCCAGCCAAGCTGACCTTCACTCCCCACACAGAGGATGGAGGTCCTT
 CTGCCACCGAGAGGGCTGCTGAGGATGGAGCCTCCAGTCAGCTCCCAGCAGCAG
 AGGGCTCTGGGGAGCAGGACTTCACTTTGAAACCTCGGGGGAGAATAACGGCTG
 TAGTGGCCGTGGAGCCTGACCGCCGGAACCAGTCCCCAGTGGATCAGGGGGCCA
 CGGGGGCCTCACAGGGCCTCCTGGACAGGAAAGAGGTGCTGGGAGGGGTCATTG
 30 CCGGAGGCCTCGTGGGGCTCATCTTTGCTGTGTGCCTGGTGGGTTTCATGCTGTA
 CCGCATGAAGAAGAAGGACGAAGGCAGCTACTCCTTGGAGGAGCCGAAACAAG
 CCAACGGCGGGGCCCTACCAGAAGCCCAACCAACAGGAGGAATTCTATGCCTGAC
 GCGGGAGCCATGCGCCCCCTCCGCCCTGCCACTCACTAGGCCCCCACTTGCCTCT
 TCCTTGAAGAACTGCAGGCCCTGGCCTCCCTGCCACCAGGCCACCTCCCCAGCA
 35 TTCCAGCCCCTCTGGTCGCTCCTGCCCACGGAGTCGTGGGTGTGCTGGGAGCTCC
 ACTCTGCTTCTCTGACTTCTGCCTGGAGACTTAGGGCACCAGGGGTTTCTCGCAT
 AGGACCTTTCCACCACAGCCAGCACCTGGCATCGCACCATTCTGACTCGGTTTCT
 CCAAACCTGAAGCAGCCTCTCCCCAGGTCCAGCTCTGGAGGGGAGGGGGATCCGA
 CTGCTTTGGACCTAAATGGCCTCATGTGGCTGGAAGATCCTGCGGGTGGGGCTTG
 40 GGGCTCACACACCTGTAGCACTTACTGGTAGGACCAAGCATCTTGGGGGGGTGG
 CCGCTGAGTGGCAGGGGACAGGAGTCACTTTGTTTCGTGGGGAGGTCTAATCTAG
 ATATCGACTTGTTTTTGCACATGTTTCTCTAGTTCTTTGTTCATAGCCCAGTAGA
 CCTTGTTACTTCTGAGGTAAGTTAAGTAAGTTGATTTCGGTATCCCCCATCTTGCT
 TCCCTAATCTATGGTCGGGAGACAGCATCAGGGTTAAGAAGACTTTTTTTTTTTT
 45 TTAAACTAGGAGAACCAAAATCTGGAAGCCAAAATGTAGGCTTAGTTTGTGTGTT
 GTCTCTTGAGTTTGTGCTCATGTGTGCAACAGGGTATGGACTATCTGTCTGGTG
 GCCCCGTTCTGGTGGTCTGTTGGCAGGCTGGCCAGTCCAGGCTGCCGTGGGGCCG
 CCGCCTCTTCAAGCAGTCGTGCCTGTGTCCATGCGCTCAGGGCCATGCTGAGGC
 CTGGGCCGCTGCCACGTTGGAGAAGCCCGTGTGAGAAGTGAATGCTGGGACTCA

GCCTTCAGACAGAGAGGACTGTAGGGAGGGCGGCAGGGGCCTGGAGATCCTCCT
 GCAGGCTCACGCCCCGTCTCCTGTGGCGCCGTCTCCAGGGGCTGCTTCCTCCTGG
 AAATTGACGAGGGGTGTCTTGGGCAGAGCTGGCTCTGAGCGCCTCCATCCAAGG
 CCAGGTTCTCCGTTAGCTCCTGTGGCCCCACCCTGGGCCCTGGGCTGGAATCAGG
 5 AATATTTTCCAAAGAGTGATAGTCTTTTGGCTTTTGGCAAACTCTACTTAATCCAA
 TGGGTTTTTCCCTGTACAGTAGATTTTCCAAATGTAATAAACTTTAATATAAAGTA
 GTCTGTGAATGCCACTGCCTTCGCTTCTTGCCTCTGTGCTGTGTGTGACGTGACCG
 GACTTTTCTGCAAACACCAACATGTTGGGAACTTGGCTCGAATCTCTGTGCCTT
 CGTCTTTCCCATGGGGAGGGATTCTGGTTCAGGGTCCCTCTGTGTATTTGCTTTT
 10 TTGTTTTGGCTGAAATTCTCCTGGAGGTCGGTAGGTTCAAGCAAGGTTTTATAAG
 GCTGATGTCAATTTCTGTGTTGCCAAGCTCCAAGCCCATCTTCTAAATGGCAAAG
 GAAGGTGGATGGCCCCAGCACAGCTTGACCTGAGGCTGTGGTCACAGCGGAGGT
 GTGGAGCCGAGGCCTACCCCNACAGACACCTTGGACATCCTCCTCCCACCCGGCTG
 CAGAGGCCAGANNCCAGCCCAGGGTCTGCACTTACTTGCTTATTTGACAACGTT
 15 TCAGCGACTCCGTTGGCCACTCCGAGAGTGGGCCAGTCTGTGGATCAGAGATGC
 ACCACCAAGCCAAGGGAACCTGTGTCCGGTATTCGATACTGCGACTTTCTGCCTG
 GAGTGTATGACTGCACATGACTCGGGGGTGGGGAAAGGGGTCGGCTGACCATGC
 TCATCTGCTGGTCCGTGGGACGGTNCCCCAAGCCAGAGGTGGGTTCATTTGTGTAA
 CGACAATAAA

20

SEQ ID NO: 293

gi|36628|emb|X07820.1|HSSTROM2 Human mRNA for metalloproteinase stromelysin-2

AAAGAAGGTAAGGGCAGTGAGAATGATGCATCTTGCATTCTTGTGCTGTTGTGT
 CTGCCAGTCTGCTCTGCCTATCCTCTGAGTGGGGCAGCAAAAGAGGAGGACTCCA
 25 ACAAGGATCTTGCCAGCAATACCTAGAAAAGTACTACAACCTCGAAAAGGATG
 TGAAACAGTTTAGAAGAAAGGACAGTAATCTCATTGTTAAAAAATCCAAGGAA
 TGCAGAAGTTCCTTGGGTTGGAGGTGACAGGGAAGCTAGACACTGACACTCTGG
 AGGTGATGCGCAAGCCCAGGTGTGGAGTTCCTGACGTTGGTCACTTCAGCTCCTT
 TCCTGGCATGCCGAAGTGGAGGAAAACCCACCTTACATACAGGATTGTGAATTAT
 30 ACACCAGATTTGCCAAGAGATGCTGTTGATTCTGCCATTGAGAAAGCTCTGAAAG
 TCTGGGAAGAGGTGACTCCACTCACATTCTCCAGGCTGTATGAAGGAGAGGCTG
 ATATAATGATCTCTTTTCGCAGTTAAAGAACATGGAGACTTTTACTCTTTTGATGGC
 CCAGGACACAGTTTGGCTCATGCCTACCCACCTGGACCTGGGCTTTATGGAGATA
 TTCACTTTGATGATGATGAAAAATGGACAGAAGATGCATCAGGCACCAATTTATT
 35 CCTCGTTGCTGCTCATGAACTTGGCCACTCCCTGGGGCTCTTCACTCAGCCAACA
 CTGAAGCTTTGATGTACCCACTCTACAACCTCATTACAGAGCTCGCCCAGTTCCG
 CCTTTCGCAAGATGATGTGAATGGCATTGAGTCTCTCTACGGACCTCCCCCTGCCT
 CTACTGAGGAACCCCTGGTGCCCAAAAATCTGTTCTTCGGGATCTGAGATGCC
 AGCCAAGTGTGATCCTGCTTTGTCTTCGATGCCATCAGCACTCTGAGGGGAGAA
 40 TATCTGTTCTTTAAAGACAGATATTTTTGGCGAAGATCCCACTGGAACCCTGAAC
 CTGAATTTCAATTTGATTTCTGCATTTTGGCCCTCTCTTCCATCATATTTGGATGCTG
 CATATGAAGTTAACAGCAGGGACACCGTTTTTATTTTTAAAGGAAATGAGTTCCTG
 GGCCATCAGAGGAAATGAGGTACAAGCAGGTTATCCAAGAGGCATCCATACCTT
 GGGTTTTCTCCAACCATAAGGAAAATTGATGCAGCTGTTTCTGACAAGGAAAAG
 45 AAGAAAACATACTTCTTTGCAGCGGACAAATACTGGAGATTTGATGAAAATAGC
 CAGTCCATGGAGCAAGGCTTCCCTAGACTAATAGCTGATGACTTTCCAGGAGTTG
 AGCCTAAGGTTGATGCTGTATTACAGGCATTTGGATTTTTCTACTTCTTCAGTGGA
 TCATCACAGTTTGAGTTTGACCCCAATGCCAGGATGGTGACACACATATTAAGA
 GTAACAGCTGGTTACATTGCTAGGCGAGATAGGGGGAAGACAGATATGGGTGTT

TTTAATAAATCTAATAATTATTCATCTAATGTATTATGAGCCAAAATGGTTAATTT
TTCCTGCATGTTCTGTGACTGAAGAAGATGAGCCTTGCAGATATCTGCATGTGTC
ATGAAGAATGTTTCTGGAATTCTTCACTTGCTTTTGAATTGCACTGAACAGAATT
AAGAAATACTCATGTGCAATAGGTGAGAGAATGTATTTTCATAGATGTGTTATTA
5 CTTCTCAATAAAAAGTTTTATTTTGGGCCTGTTCTT

SEQ ID NO: 294

>gi|750011|gb|R00275.1|R00275 ye72b08.s1 Soares fetal liver spleen 1NFLS Homo sapiens
cDNA clone IMAGE:123255 3', mRNA sequence

10 TTANTCAATTTGCTATGTATATACGNGTTTATTATATGCTTATTACAAAAGAAAA
AGTCTTTTGCCTTATTTTAGGGCTTCCATGTAAAACCTAGTTAAAATACAAAAG
TAAATTAGNGAAAAATTCTGCTTAGGNAGTGAAANTTGATAGCAACTTATAAGC
TGTATCCTTAAAANCCTAGTCACAGATNTAGNNTTACGTAAAGNTAAANTGATA
AGCCTACTTNTTGGCAAGAANCAGGTTAGGCCACTTANGCAGCATGTTTCTNCCA
15 CTNTACANTTACATCGGCAGGTCCAAACNTTAANCCACCNTTCGNTTGACAACCT
TCTATTTTCAACTT

SEQ ID NO: 295

>gi|1496145|gb|AA029889.1|AA029889 zk08e05.s1 Soares_pregnant_uterus_NbHPU Homo
sapiens cDNA clone IMAGE:469952 3', mRNA sequence

20 TTTTTTTTCTGTTTGTCTGATTTTATTATTTAAAAAATGGAAAAACAAAAGT
GCATTTTTCATTCAATAAATGTTCCATCCTTATTTAGTTTGTGCGGAAAGTGAA
GTCCATGACTTTAGAATGATAGCAATTTATCAACCAAAGAATCCGTCTTCACACC
GTTTCAATAACTGCAGCAATTTCTTGAAGTGTCTGTAGAAATTCTGAAACTGTG
25 GAATCGTCATTTCAAAGCACTTGGTCTTACTTGGCCTGAATGATCTGCCACTTTT
AGCATCACTGCAACGTAAGGATACTTAAGAGATCTGCAAGTGTCTGAGCTCACA
GCCATACCCAGTTTCCACTGAAAATCTACAAGCTGGGTGGTGACATCGGACTTAG
CATCCAGCGGCGGCCTCGGTGCC

30 SEQ ID NO: 296

>gi|307127|gb|L08096.1|HUMLIGAND Human CD27 ligand mRNA, complete cds

CCAGAGAGGGGCAGGCTTGTCCTTCTCCTTCTCGGCAGCGCTCCGCGCCC
GCCCCGGGAGGGGGCTGCAGTTTCCTTCTCCTTCTCGGCAGCGCTCCGCGCCC
CCATCGCCCCCTCCTGCGCTAGCGGAGGTGATCGCCGCGCGATGCCGGAGGAGG
35 GTTCGGGCTGCTCGGTGCGGCGCAGGCCCTATGGGTGCGTCCTGCGGGCTGCTTT
GGTCCCATTGGTTCGCGGGCTTGGTGATCTGCCTCGTGGTGTGCATCCAGCGCTTC
GCACAGGCTCAGCAGCAGCTGCCGCTCGAGTCACTTGGGTGGGACGTAGCTGAG
CTGCAGCTGAATCACACAGGACCTCAGCAGGACCCCAGGCTATACTGGCAGGGG
GGCCCAGCACTGGGCCGCTCCTTCTGTCATGGACCAGAGCTGGACAAGGGGCAG
40 CTACGTATCCATCGTGATGGCATCTACATGGTACACATCCAGGTGACGCTGGCCA
TCTGCTCCTCCACGACGGCCTCCAGGCACCAACCCACCCCTGGCCGTGGGAAT
CTGCTCTCCCGCCTCCCGTAGCATCAGCCTGCTGCGTCTCAGCTTCCACCAAGGTT
GTACCATTTGTCTCCAGCGCCTGACGCCCTGGCCCGAGGGGACACACTCTGCAC
CAACCTCACTGGGACACTTTTGCCTTCCCGAAACACTGATGAGACCTTCTTTGGA
45 GTGCAGTGGGTGCGCCCCTGACCACTGCTGCTGATTAGGGTTTTTTAAATTTTATT
TTATTTTATTTAAGTTCAAGAGAAAAAGTGACACACAGGGGCCACCCGGGGTTG
GGGTGGGAGTGTGGTGGGGGGTAGTTTGTGGCAGGACAAGAGAAGGCATTGAGC
TTTTTCTTTCATTTTCTATTAAAAAATACAAAATCAAAAACAAAAA

SEQ ID NO: 297

>gi|788599|gb|R32756.1|R32756 yh74b09.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:135449 3' similar to gb:X66899 RNA-BINDING PROTEIN EWS (HUMAN);, mRNA sequence

5 GAGGAAGACGAGGTGGCCCTGGGGCCCNCTGGACCTTTGATGGAACAGATGGGA
GGAAGAAGAGGAGGACGTGGAGGACCTGGAAAAATGGATAAAGGCGAGCACCG
TCAGAGCGCAGAGATCGGCCCTACTAGATGCAGAGACCCCGCAGAGCTGCATTG
ACTACCAGATTTATTTTTTAAACCAGAAAATGTTTTAAATTTATTAATTCCATATT
TATAATGTTGGCCACAACATTATTGATTATTCCTTGTCTGTACTTTAGTATTTTTC
10 ACCATTTGTGAAGGAAACATTAACAAGTTTAAATGGGTNAAAAAAAAAACCT
CGTGCCCGATTCTTNGGCCTTCGAGGGCCAATTCCTNTTGGTGAGTCCTATTN
AAT

SEQ ID NO: 298

15 >556963H1

CTTTCACACAAAGAAAAAGTTGTCTGTGTGCGCAAATCCAAAACAGACTTGGGT
GAAATATATTGTGCGTCTCCTCAGTAAAAAAGTCAAGAACATGTAAAAACTGTG
GCTTTTCTGGAATGGAATTGGACATAGCCCAAGAACAGAAAGAACCTTGCTGGG
GTTGGAGGTTTCACTTGCACATCATGGAGGGTTTAGTGCTTATCTAATTTGTG

20

SEQ ID NO: 299

>gi|179413|gb|M37722.1|HUMBFGFS Human shorter form basic fibroblast growth factor (bFGF) receptor mRNA, complete cds

CCGGCCGCGGAGCTCTTGCACCCCGCCAGGACCCGAACAGAGCCCGGGGGCGG
25 CGGGCCGCGGAGCCGGGGACGCGGGCACACGCCCGCTCGCACAAAGCCACGGCGGA
CTCTCCCGAGGCGGAACCTCCACGCCGAGCGAGGGTCAGTTTGAAAAGGAGGAT
CGAGCTCACTGTGGAGTATCCATGGAGATGTGGAGCCTTGTACCAACCTCTAAC
TGCAGAACTGGGATGTGGAGCTGGAAGTGCCTCCTCTTCTGGGCTGTGCTGGTCA
CAGCAACACTCTGCACCGCTAGGCCGTCCCCGACCTTGCCTGAACAAGATGCTCT
30 CCCCTCCTCGGAGGATGATGATGATGATGATGACTCCTCTTCAGAGGAGAAAGA
AACAGATAACACCAAACCAAACCCCGTAGCTCCATATTGGACATCCCCAGAAAA
GATGGAAAAGAAATTGCATGCAGTGCCGGCTGCCAAGACAGTGAAGTTCAAATG
CCCTTCCAGTGGGACCCCAAACCCACACTGCGCTGGTTGAAAAATGGCAAAGA
ATTCAAACCTGACCACAGAATTGGAGGCTACAAGGTCCGTTATGCCACCTGGAG
35 CATCATAATGGACTCTGTGGTGCCCTCTGACAAGGGCAACTACACCTGCATTGTG
GAGAATGAGTACGGCAGCATCAACCACACATAACCAGCTGGATGTCGTGGAGCGG
TCCCCTCACCGGCCCATCCTGCAAGCAGGGTTGCCCGCCAACAAAACAGTGGCCC
TGGGTAGCAACGTGGAGTTCATGTGTAAGGTGTACAGTGACCCGCAGCCGCACA
TCCAGTGGCTAAAGCACATCGAGGTGAATGGGAGCAAGATTGGCCCAGACAACC
40 TGCCTTATGTCCAGATCTTGAAGACTGCTGGAGTTAATACCACCGACAAAGAGAT
GGAGGTGCTTCACTTAAGAAATGTCTCCTTTGAGGACGCAGGGGAGTATACGTGC
TTGGCGGGTAACTCTATCGGACTCTCCCATCACTCTGCATGGTTGACCGTTCTGG
AAGCCCTGGAAGAGAGGCGGCAGTGATGACCTCGCCCCTGTACCTGGAGATCA
TCATCTATTGCACAGGGGCCTTCCTCATCTCCTGCATGGTGGGGTCGGTCATCGTC
45 TACAAGATGAAGAGTGGTACCAAGAAGAGTGACTTCCACAGCCAGATGGCTGTG
CACAAGCTGGCCAAGAGCATCCCTCTGCGCAGACAGGTAACAGTGTCTGCTGAC
TCCAGTGCATCCATGAACTCTGGGGTTCTTCTGGTTCGGCCATCACGGCTCTCCTC
CAGTGGGACTCCCATGCTAGCAGGGGTCTCTGAGTATGAGCTTCCCGAAGACCTT
CGCTGGGAGCTGCCTCGGGACAGACTGGTCTTAGGCAAACCCCTGGGAGAGGGC

TGCTTTGGGCAGGTGGTGTGGCAGAGGCTATCGGGCTGGACAAGGACAAACCC
 AACCGTGTGACCAAAGTGGCTGTGAAGATGTTGAAGTCGGACGCAACAGAGAAA
 GACTTGTGACACCTGATCTCAGAAATGGAGATGATGAAGATGATCGGGAAGCAT
 AAGAATATCATCAACCTGCTGGGGGCCTGCACGCAGGATGGTCCCTTGTATGTCA
 5 TCGTGGAGTATGCCTCCAAGGGCAACCTGCGGGAGTACCTGCAGGCCCGGAGGC
 CCCCAGGGCTGGAATACTGCTACAACCCAGCCACAACCCAGAGGAGCAGCTCT
 CCTCCAAGGACCTGGTGTCTGCGCCTACCAGGTGGCCCGAGGCATGGAGTATCT
 GGCCTCCAAGAAGTGCATACACCGAGACCTGGCAGCCAGGAATGTCCTGGTGAC
 AGAGGACAATGTGATGAAGATAGCAGACTTTGGCCTCGCACGGGACATTACCA
 10 CATCGACTACTATAAAAAGACAACCAACGGCCGACTGCCTGTGAAGTGGATGGC
 ACCCGAGGCATTATTTGACCGGATCTACACCCACCAGAGTGATGTGTGGTCTTTC
 GGGGTGCTCCTGTGGGAGATCTTCACTCTGGGCGGCTCCCCATACCCCGGTGTGC
 CTGTGGAGGAACTTTTCAAGCTGCTGAAGGAGGGTCACCGCATGGACAAGCCCA
 GTAAGTGCACCAACGAGCTGTACATGATGATGCGGGACTGCTGGCATGCAGTGC
 15 CCTCACAGAGACCCACCTTCAAGCAGCTGGTGGAAAGACCTGGACCGCATCGTGG
 CTTGACCTCCAACCAGGAGTACCTGGACCTGTCCATGCCCTGGACCACTACTC
 CCCCAGCTTTCCCGACACCCGGAGCTCTACGTGCTCCTCAGGGGAGGATTCCGTC
 TTCTCTCATGAGCCGCTGCCCGAGGAGCCCTGCCTGCCCCGACACCCAGCCCAGC
 TTGCCAATGGCGGACTCAAACGCCGCTGACTGCCACCCACACGCCCTCCCCAGAC
 20 TCCACCGTCAGCTGTAACCCTCACCCACAGCCCCTGCTGGGCCACACCTGTCC
 GTCCCTGTCCCCTTTCTGCTGGCAGGAGCCGGCTGCCTACCAGGGGCCTTCTCTG
 TGTGGCCTGCCTTACCCCACTCAGCTCACCTCTCCCTCCACCTCCTCTCCACCTG
 CTGGTGTGAGAGGTGCAAAGAGGAGCAGATCTTTGCTGCCAGCCACTTCATCCCTCCAC
 GATGTTGGACCAACACCCCTCCCTGCCACCAGGCATCTGCCGGATGGGCAGAGT
 25 GGAGCAATGAACAGGCATGCAAGTGAGAGCTTCTGAGCTTTCTCCTGTGCGGTTT
 GGTCTGTTTTGCCTTACCCATAAGCCCCTCGCACTCTGGTGGCAGGTGCTTGTCC
 TCAGGGCTACAGCAGTAGGGAGGTGAGTGTCTTCGTGCCTCGATTGAAGGTGACCT
 CTGCCCCAGATAGGTGGTGGCAGTGGCTTATTAATTCCGATACTAGTTTGTCTTGC
 TGACCAAATGCCTGGTACCAGAGGATGGTGAAGCGAAGGCCAGGTTGGGGGCAG
 30 TGTTGTGCCCTGGCCAGCCAACTGGGGGCTCTGTGGGGGCTCTGTATATAGCT
 ATGAAGAAAACACAAAGTGTATAAATCTGAGTATATATTTACATGTCTTTTTAAA
 AGGGTCGTTACCAGAGATTTACCCATCGGGTAAGATGCTCCTGGTGGCTGGGAG
 GCATCAGTTGCTATATATTTAAAAACAAAAAAGAAAAAAGGAAAATGTTTTTA
 AAAAGGTCATATATTTTTTGCTACTTTTGCTGTTTTATTTTTTAAATTATGTTCTA
 35 AACCTATTTTCAGTTTAGGTCCCTCAATAAAAATTGCTGCTGCTTAAAAACC

SEQ ID NO: 300

>gi|2161764|gb|AA448094.1|AA448094 zw82c03.r1 Soares_testis_NHT Homo sapiens
 cDNA clone IMAGE:782692 5', mRNA sequence

40 CCGTTCTGGGGCCAGGAAGTGGGGAAGAGTAGGTTCTCGGTACTTAGGACTTG
 ATCCTGTGGTTGGCCACTGGCATGCTGCTGCCAGCTCTACCCCTCCCAGGGACC
 TACCCCTCCCAGGGACCGACCCCTGGCCCAAGCTCCCCTTGCTGGCGGGCGCTGC
 GTGGGCCCTGCACTTGCTGAGGTTCCCCATCATGGGCAAGGAAGGGAATTCCCAC
 AGCCCTCCAGTGTACTGAGGGTACTGGCCTAGCCATGTGGAATTCCCTACCTGA
 45 CTCCTTCCCCAAACCCAGGGAAAAGAGCTCTCAATTTTTTATTTTTTAATTTTTGTT
 TGAAATA

SEQ ID NO: 301

>gi|2219002|gb|AA489400.1|AA489400 ab41a09.r1 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:843352 5' similar to SW:PRCF_HUMAN P40306

PROTEASOME COMPONENT MECL-1 PRECURSOR ;, mRNA sequence

5 CAAAGGTCCGGA AAACTGGCACGACCATCGCTGGGGTGGTCTATAAGGATGGCA
TAGTTCTTGGAGCAGATACAAGAGCAACTGAAGGGATGGTTGTTGCTGACAAGA
ACTGTTCAAAAATACACTTCATATCTCCTAATATTTATTGTTGTGGTGCTGGGACA
GCTGCAGACACAGACATGACAACCCAGCTCATTTCTTCCAACCTGGAGCTCCACT
10 CCCTCTCCACTGGCCGTCTTCCCAGAGTTGTGACAGCCAATCGGATGCTGAAGCA
GATGCTTTTTCAGGTATCAAGGTTACATTGGTGCAGCCCTAGTTTTAGGGGGAGTA
GATGTTACTGGACCTCACCTCTACAGCATCTATCCTCATGGATCAACTGATAAGT
TGCCTTATGTCACCATGGGTTCTGGCTCCTTGGCAGCAATGGCTGTATTTGAAGA
TAAG

15 SEQ ID NO: 302

>g1751443

TGAGGGCACATGTTTATTTAGCAGACAAGGTGGGGCTCCATCAGCGGGGTGGCC
TGGGGAGCAGCTGCATGGGTGGCACTGTGGGGAGGGTCTCCCAGCTCCCTCAAT
GGTGTTCGGGCTGGTGCGGCANTGGCGGCACCTGTNACTCAGCCGTCGATACACT
20 GGTGATTGGGACAGGGAAGACGATGTGGTTTTTC

SEQ ID NO: 303

>2731293H1

5 GAGAGGCAGCAGCTTGCTCAGCGGACAAGGATGCTGGGCGTGAGGGACCAAGG
25 CCTGCCCTGCACTCGGGCCTCCTCCAGCCAGTGCTGACCAGGGACTTCTGACCTG
CTGGCCAGCCAGGACCTGTGTGGGGAGGCCCTCCTGCTGCCTTGGGGTGACAATC
TCAGCTCCAGGCTACAGGGAGACCGGGAGGATCACAGTGCCAGCATGGATCCTG
ACAGTGATCAACCTCTGAACAG

30 SEQ ID NO: 304

>gi|2261974|gb|AA521431.1|AA521431 aa69b11.s1 NCI_CGAP_GCB1 Homo sapiens
cDNA clone IMAGE:826173 3' similar to gb:J03191 PROFILIN I (HUMAN);, mRNA
sequence

35 TTGTAGTAG
AATCTTTTTTATTCAGAAAAAAAACCCCAAAAAACAAAAGTTTTCCAACCACA
CACGGGAGGGATATGGGTAGGGGGAGGTGTCTGTCCATCCAGCCCTGGCCCCCA
GCCCATGTGGTTTTTGGCAGCAATAAGGGGTATGGGGTAATGGCCCCAAAAAATAA
AATGGTTTGTGTGTGTATGGGGAGGAAAGGGGTGCAAAGCTGTGGGGAGGGGTG
AAGGGGAAGGGACAGACGAGGTCAGTACTGGGAACGCCGAAGTGTGGAGGCCA
40 TTTCATAACATTTCTTGTTGATCAAACCACCGTGGAAACCTTCTTTGCCCATCAGC
AGGACTAGCGTCTTGTGAGTCTTGGTGACAGTGACATTTAAGGTTGGGGCCCCAC
CGTGCTCTTGGTACGAAGATCCATGCAAATTTCCCTCGTTAGGAAGTGAGTCCG
GGTCACTGTTTATTTTTTGGCTCTATTTTTTTTTTTGGGCGGTTTTTTTTTGTGGGT
TTTTTTTCGGGGGGGGGTTCTTTTTTGAT

45

SEQ ID NO: 305

>gi|1856267|gb|AA233079.1|AA233079 zr69f11.r1 Soares_NhHMPu_S1 Homo sapiens
cDNA clone IMAGE:668685 5' similar to gb:M59316_rna1 INSULIN-LIKE GROWTH
FACTOR BINDING PROTEIN 1 PRECURSOR (HUMAN);, mRNA sequence

TGTTCTGTCACGTGAAATATTTAAGTATATAGTATATTTATACTCTAGAACATGCA
CATTTATATATATATGTATATGTATATATATATAGTAACTACTTTTTATACTCCAT
ACATAACTTGATATAGAAAGCTGTTTATTTATTAAGTGTAAAGTTTATTTTTCTAC
ACAGTAAAACTTGTACTATGTTAATAACTTGTCCCTATGTCAATTTGTATATCATG
5 AACACTTCTCATCATAATGGAAGGAAGGTAATTGCATTCCTGCTCTTCCAAAGC
TCCTGCGTCTGTTTTTAAAGAGCATGGAAAAATACTGCCTAGAAAATGCAAAATG
AAATAAGAGAGAGTAGTTTTTCAGCTAGTTTGAAGGAGGACGGTTAACTTGTATA
TTCCACCATTACATTTGATGTACATGTGTAGGGAAAAGTAAAAGTGTTGATACAT
AATCAAGCTACCGTGGTGATGTTGCCACTGTTAAATGTACCTGGATATGTTGTTA
10 ACACGTGTCTATAATGGAA

SEQ ID NO: 306

>gi|188627|gb|M26383.1|HUMMONAP Human monocyte-derived neutrophil-activating protein (MONAP) mRNA, complete cds

15 AGCAGAGCACACAAGCTTCTAGGACAAGAGCCAGGAAGAAACCACCGGAAGGA
ACCATCTCACTGTGTGTAAACATGACTTCCAAGCTGGCCGTGGCTCTCTTGGCAG
CCTTCCTGATTTCTGCAGCTCTGTGTGAAGGTGCAGTTTTGCCAAGGAGTGCTAA
AGAAGTTAGATGTCAGTGCATAAAGACATACTCCAAACCTTTCCACCCCAAATTT
ATCAAAGAACTGAGAGTGATTGAGAGTGGACCACACTGCGCCAACACAGAAATT
20 ATTGTAAAGCTTTCTGATGGAAGAGAGCTCTGTCTGGACCCCAAGGAAAAGTGG
GTGCAGAGGGTTGTGGAGAAGTTTTTGAAGAGGGCTGAGAATTCATAAAAAAAT
TCATTCTCTGTGGTATCCAAGAATCAGTGAAGATGCCAGTGAAACTTCAAGCAAA
TCTACTTCAACACTTCATGTATTGTGTGGGTCTGTTGTAGGGTTGCCAGATGCAAT
ACAAGATTCTGGTTAAATTTGAATTTTCAAGTAAACAATGAATAGTTTTTTCATTGT
25 ACCATGAAATATCCAGAACATACTTATATGTAAAGTATTATTTATTTGAATCTAC
AAAAACAACAAATAATTTTTAAATATAAGGATTTTCCTAGATATTGCACGGGAG
AATATACAAATAGCAAAATTGAGCCAAGGGCCAAGAGAATATCCGAACCTTTAAT
TTCAGGAATTGAATGGGTTTGCTAGAATGTGATATTTGAAGCATCACATAAAAAAT
GATGGGACAATAAATTTTGCCATAAAGTCAAATTTAGCTGGAAATCCTGGATTTT
30 TTTCTGTAAATCTGGCAACCCTAGTCTGCTAGCCAGGATCCACAAGTCCTTGTTT
CACTGTGCCTTGGTTTCTCCTTTATTTCTAAGTGGAAAAAGTATTAGCCACCATCT
TACCTCACAGTGATGTTGTGAGGACATGTGGAAGCACTTTAAGTTTTTTCATCAT
AACATAAATTATTTTCAAGTGTAACCTATTTAATTTATTTATGTATTTAT
TTAAGCATCAAATATTTGTGCAAGAATTTGGAAAAATAGAAGATGAATCATTGAT
35 TGAATAGTTATAAAGATGTTATAGTAAATTTATTTTATTTTAGATATTAATGATG
TTTTATTAGATAAATTTCAATCAGGGTTTTTAGATTAAACAAAGAAACAATTGGG
TACCCAGTTAAATTTTCATTTTCAAGATAAACAACAATAATTTTTTTAGTATAAGTA
CATTATTGTTTATCTGAAAGTTTTAATTGAACATAACAATCCTAGTTTGATACTCCC
AGTCTTGTCATTGCCAGCTGTGTTGGTAGTGCTGTGTTGAATTACGGAATAATGA
40 GTTAGAACTATTAAAACAGCCAAAACCTCCACAGTCAATATTAGTAATTTCTTGCT
GGTTGAACTTGTTTATTATGTACAAATAGATTCTTATAATATTATTTAAATGACT
GCATTTTTAAATACAAGGCTTTATATTTTAACTTTAAGATGTTTTTATGTGCTCT
CCAAATTTTTTTTACTGTTTCTGATTGTATGGAAATATAAAAGTAAATATGAAAC
ATTTAAATATAATTTGTTGTCAAAGTAAAAAAAAAAAAAAAAA
45

SEQ ID NO: 307

>3530687H1

AGATCATTACACAATGCTGGCCTCCTTGATGAATAAAGATGGGGTTCATATC
CGAGGGCCAAGGCTTCATGACAAGGGAGTTTCTAAAGAGCCTGCGAAAGCCTTT

TGGTGACTTTATGGAGCCCAAGTTTGAGTTTGCTGTGAAGTTCAATGCACTGGAA
 TTAGATGACAGCGACTTGGAATATTTATTGCTGTCATTATTCTCAGTGGAGACC
 GCCCAGGTTTGCTGAATGTGAAGCCCATTGAAGACATTCAAGACAACCTGCTACA
 AGCCCTGGAGCTCCAGCTGAAG

5

SEQ ID NO: 308

>gi|1164660|gb|N41062.1|N41062 yy53h05.s1 Soares_multiple_sclerosis_2NbHMSP Homo sapiens cDNA clone IMAGE:277305 3' similar to gb:X06820 TRANSFORMING PROTEIN RHOB (HUMAN);, mRNA sequence

10 GCGACCGCTCTCCTACCCGGACACCGACGTCATTCTCATGTGCTTCTCGGTGGAC
 AGCCCGGACTCGCTGGAGAACATCCCCGAGAAGTGGGTCCCCGAGGTGAAGCAC
 TTCTGTCCCAATGTGCCCATCATCCTGGTGGCCAACAANAAAGACCTGCGCAGGA
 CGAGCATGTCCGCACAGAGCTGGCCCGCATGAAGCAGGAACCCGTGCGCACGGA
 TGACGGCCGCGCATGGCCGTGCGCATCCAAGCCTACGACTACCTCGAGTGCTCTG
 15 CCAAGACCAAGGAAGGCGTGCGCGAGGTCTTCGAGACGGCCACGCGCGCCGNNNT
 GCAAGAAAGCGTTACGGCTCCCAGAACGGCTGCATCAACTGCTGCAAGGTGCTA
 TGAGGGCCGCGC

SEQ ID NO: 309

20 >gi|2078854|gb|AA419108.1|AA419108 zv34a06.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:755506 5' similar to gb:M82809 ANNEXIN IV (HUMAN);, mRNA sequence

CGGTCTCGTGGGCAGAGGAACAACCAGGAAGTGGGCTCAGTCTCCACCCCACA
 GTGGGGCGGATCCGTCCCGGATAAGACCCGCTGTCTGGCCCTGAGTAGGGTGTG
 25 ACCTCCGCAGCCGCAGAGGAGGAGCGCAGCCGGCCTCGAAGAACTTCTGCTTGG
 GTGGCTGAACTCTGATCTTGACCTAGAGCATGGCATGCAACCAAAGGAGGTACT
 GTCAAAGCTGCTTCAGGATTCAATGCCATGGAAGATGCCAGACCCTGAGGAAG
 GCCATGAAAGGGCTCGGCACCGATGAAGACGCCATTATTAGCGTCCTTGCCCTACC
 GCAACACCGCCCAGCGCCAGGAGATCAGGACAGCCTACAAGAGCACCATCGGCA
 30 GGGACTTGATAGACGACCTGAAGTCAGAACTGAGTGGCACTTCGAGCAGGTGAT
 TGTGGGGATGATGACGCCACGTGCTGTATGACGTGCAAGAGCTGCGAAGGGCC
 ATGAAGGGAGCCGGAAGTATGAGGGCTGCTAATTGAGATCTTGGCTTCCGGACC
 CTTAGGAGATCGGCGCATA

35 SEQ ID NO: 310

>gi|183622|gb|J03561.1|HUMGRO Human gro (growth regulated) gene

CTCGCCAGCTCTTCCGCTCCTCTCACAGCCGCCAGACCCGCCTGCTGAGCCCCAT
 GGCCCGCGCTGCTCTCTCCGCCGCCCCAGCAATCCCCGGCTCCTGCGAGTGGCA
 CTGCTGCTCCTGCTCCTGGTAGCCGCTGGCCGGCGCGCAGCAGGAGCGTCCGTGG
 40 CCACTGAACTGCGCTGCCAGTGCTTGACAGACCCTGCAGGGAATTCACCCCAAGA
 ACATCCAAAGTGTGAACGTGAAGTCCCCCGGACCCCACTGCGCCCAAACCGAAG
 TCATAGCCACACTCAAGAATGGGCGGAAAGCTTGCCCTCAATCCTGCATCCCCCAT
 AGTTAAGAAAATCATCGAAAAGATGCTGAACAGTGACAAATCCAAGTACCAGA
 AGGGAGGAGGAAGCTCACTGGTGGCTGTTCTTGAAGGAGGCCCTGCCCTTATAG
 45 GAACAGAAGAGGAAAGAGAGACACAGCTGCAGAGGCCACCTGGATTGTGCCTA
 ATGTGTTTGAGCATCGCTTAGGAGAAGTCTTCTATTTATTTATTTATTCATTAGTT
 TTGAAGATTCTATGTAAATATTTTAGGTGTAAAATAATTAAGGGTATGATTAAGT
 CTACCTGCACACTGTCCTATTATATTCTTTTGAATGTCAACCCCAAGTTA
 GTTCAATCTGGATTTCATATTTAATTTGAAGGTAGAATGTTTTCAAATGTTCTCCAG

TCATTATGTTAATATTTCTGAGGAGCCTGCAACATGCCAGCCACTGTGATAGAGG
CTGGCGGATCCAAGCAAATGGCCAATGAGATCATTGTGAAGGCAGGGGAATGTA
TGTGCACATCTGTTTTGTAAGTGTGTTAGATGAATGTCAGTTGTTATTTATTGAAAT
GATTTACAGTGTGTGGTCAACATTTCTCATGTTGAACTTTAAGAACTAAAATG
5 TTCTAAATATCCCTTGGACATTTTATGTCTTTCTTGTAAAGGCATACTGCCTTGTTT
AATGGTAGTTTTACAGTGTTTCTGGCTTAGAACAAAGGGGCTTAATTATTGATGT
TTTCGGA

SEQ ID NO: 311

10 >gi|416292|gb|M34064.1|HUMNCADH Human N-cadherin mRNA, complete cds
GACTGGGTCATCCCTCCAATCAACTTGCCAGAAAACCTCCAGGGGACCTTTTCCTC
AAGAGCTTGTGAGGATCAGGTCTGATAGAGATAAAAACCTTTCACTGCGGTACA
GTGTAAGTGGGCCAGGAGCTGACCAGCCTCCAAGTGGTATCTTCATTCTCAACCC
CATCTCGGGTCAGCTGTGCGGTGACAAAGCCCCTGGATCGCGAGCAGATAGCCCG
15 GTTTCATTTGAGGGCACATGCAGTAGATATTAATGGAAATCAAGTGGAGAACCC
CATTGACATTGTCATCAATGTTATTGACATGAATGACAACAGACCTGAGTTCTTA
CACCAGGTTTGAATGGGACAGTTCCTGAGGGATCAAAGCCTGGAACATATGTG
ATGACCGTAACAGCAATTGATGCTGACGATCCCAATGCCCTCAATGGGATGTTGA
GGTACAGAATCGTGTCTCAGGCTCCAAGCACCCCTTCACCCAACATGTTTACAAT
20 CAACAATGAGACTGGTGACATCATCACAGTGGCAGCTGGACTTGATCGAGAAAA
AGTGCAACAGTATACGTTAATAATTCAAGCTACAGACATGGAAGGCAATCCAC
ATATGGCCTTTCAAACACAGCCACGGCCGTCATCACAGTGACAGATGTCAATGA
AATCCTCCAGAGTTTACTGCCATGACGTTTTATGGTGAAGTTCCTFAGAAACAGGC
TAGACATCATAGTAGCTAATCTAACTGTGACCGATAAGGATCAACCCCATACAC
25 AGCCTGGAACGCAGTGTACAGAATCAGTGGCGGAGATCCTACTGGACGGTTTCGC
CATCCAGACCGACCCAAACAGCAACGACGGGTAGTCACCGTGGTCAAACCAAT
CGACTTTGAAACAAATAGGATGTTTGTCTTACTGTTGCTGCAGAAAATCAAGTC
CCATTAGCCAAGGGAATTCAGCACCCGCCTCAGTCAACTGCAACCGTGTCTGTTA
CAGTTATTGACGTAAATGAAAACCCCTTATTTTGCCCCCAATCCTAAGATCATTCG
30 CCAAGAAGAAGGGCTTCATGCCGGTACCATGTTGACAACATTCAGTCTCAGGA
CCCAGATCGATATATGCAGCAAAATATTAGATACACTAAATTATCTGATCCTGCC
AATTGGCTAAAAATAGATCCTGTGAATGGACAAATAACTACAATTGCTGTTTTGG
ACCGAGAATCACCAAATGTGAAAAACAATATATATAATGCTACTTTTCCTTGCTTC
TGACAATGGAATTCCTCCTATGAGTGGAAACAGGAACGCTGCAGATCTATTTACTT
35 GATATTAATGACAATGCCCTCAAGTGTTACCTCAAGAGGCAGAGACTTGCGAA
ACTCCAGACCCCAATTCAATTAATATTACAGCACTTGATTATGACATTGATCCAA
ATGCTGGACCATTTGCTTTTGATCTTCCTTTATCTCCAGTGACTATTAAGAGAAAT
TGGACCATCACTCGGCTTAATGGTGAATTTTGCTCAGCTTAATTTAAAGATAAAAT
TTCTTGAAGCTGGTATCTATGAAGTTCCCATCATAATCACAGATTCGGGTAAATCC
40 TCCCAAATCAAATATTTCCATCCTGCGCGTGAAGGTTTGCCAGTGTGACTCCAAC
GGGGACTGCACAGATGTGGACAGGATTGTGGGTGCGGGGCTTGGCACCGGTGCC
ATCATTGCCATCCTGCTCTGCATCATCATCCTGCTTATCCTTGTGCTGATGTTTGT
GGTATGGATGAAACGCCGGGATAAAGAACGCCAGGCCAAACAACCTTTTAATTGA
TCCAGAAGATGATGTAAGAGATAATATTTTAAATATGATGAAGAAGGTGGAGG
45 AGAAGAAGACCAGGACTATGACTTGAGCCAGCTGCAGCAGCCTGACACTGTGGA
GCCTGATGCCATCAAGCCTGTGGGAATCCGACGAATGGATGAAAGACCCATCCA
CGCCGAGCCCCAGTATCCGGTCCGATCTGCAGCCCCACACCCTGGAGACATTGGG
GACTTCATTAATGAGGGCCTTAAAGCGGCTGACAATGACCCACAGCTCCACCAT
ATGACTCCCTGTTAGTGTTTGACTATGAAGGCAGTGGCTCCACTGCTGGGTCTT

GAGCTCCCTTAATTCCTCAAGTAGTGGTGGTGAGCAGGACTATGATTACCTGAAC
GACTGGGGGCCACGGTTCAAGAACTTGCTGACATGTATGGTGGAGGTGATGAC
TGAACCTTCAGGGTGAACCTTGGTTTTTGGACAAGTACAAACAATTTCAACTGATAT
TCCCAAAAAGCATTCAAGAGCTAGGCTTTAACTTTGTAGTCTACTAGCACAGTGC
5 CTGCTGGAGGCTTTGGCATAGGCTGCAAACCAATTTGGGCTCAGAGGGAATATC
AGTGATCCATACTGTTTGGAAAAACACTGAGCTCAGTTACACTTGAATTTTACAG
TACAGAAGCACTGGGATTTTATGTGCCTTTTTGTACCTTTTTTCAGATTGGAATTAG
TTTTCTGTTTAAGGCTTTAATGGTACTGATTTCTGAAACGATAAGTAAAAGACAA
AATATTTTGTGGTGGGAGCAGTAAGTTAAACCATGATATGCTTCAACACGCTTTT
10 GTTACATTGCATTTGCTTTTATTAAAATACAAAATTAAACAAACAAAAAACTCA
TGGAGCGATTTTATTATCTTGGGGGATGAGACCATGAGATTGGAAAATGTACATT
ACTTCTAGTTTTAGACTTTAGTTTGTTTTTTTTTTTTTTCACTAAAATCTTAAACT
TACTCAGCTGGTTGCAAATAAAGGGAGTTTTTCATATCACCAATTTGTAGCAAAAT
TGAATTTTTTCATAAACTAGAATGTTAGACACATTTTGGTCTTAATCCATGTACAC
15 CTTTTTATTTCTGTATTTTCCACTTCACTGTAAAAATAGTATGTGTACATAATGTT
TTATTGGCATACGTCTATGGAGAAGTGCAGAACTTCAGAACATGTGTATGTATT
ATTTGGACTATGGATTCAGGTTTTTGCATGTTTATATCTTTCGTTATGGATAAAG
TATTTACAAAACAGTGACATTTGATTCAATTGTTGAGCTGTAGTTAGAATACTCA
ATTTTAAATTTTTTTAATTTTTTTTATTTTTTATTTTCTTTTTGGTTTGGGGAGGGAG
20 AAAAGTTCTTAGCACAAATGTTTTACATAATTTGTACCAAAAAAAAAAAAAAAG
GAAAGGAAAGAAAGGGGTGGCCTGACACTGGTGGCACTACTAAGTGTGTGTTTT
TTTAAAAAAAAAAATGGAAAAAAAAAAAGCCTTTAACTGGAGAGACTTCTGACAA
CAGCTTTGCCTCTGTATTGTGTACCAGAATATAAATGATACACCTCTGACCCAG
CGTTCTGAATAAAATGCTAATTTTGGATAACAAAAAAGGGGAATTC

25

SEQ ID NO: 312

>1334463H1

CACACAGTCAAGCTTTAAAGAAAGTGTTTGCTGAAAATAAAGAAATCCAGAAAT
TGGCAGAGCAGTTTGTCTCTCAATCTGGTTTATGAAACAACCTGACAAACACCT
30 TTCTCCTGATGGCCAGTATGTCCCCAGGATTATGTTTGTGACCCATCTCTGACAG
TTAGAGCCGATATCACTGGAAGATATTCAAACCGTCTCTATGCTTACGAACCTGC
AGATACAGCTC

SEQ ID NO: 313

35 >gi|2216301|gb|AA486085.1|AA486085 ab14c11.s1 Stratagene lung (#937210) Homo
sapiens cDNA clone IMAGE:840788 3' similar to gb:S54005 THYMOSIN BETA-10
(HUMAN);, mRNA sequence

GGTGTGTTTTATTTTCATTATTCATACAAATAATTTTCTATAATATCCCGGGGCAA
ACCGGAGAATTTGGCAGTCCGATTGGGGGG

40

SEQ ID NO: 314

>gi|292418|gb|M64749.1|HUMRDC1A Human homologue of the canine orphan receptor
(RDC1) mRNA, 5' end

ATGGATCTGCACCTCTTCGACTACGCCGAGCCAGGCAACTTCTCGGACATCAGCT
45 GGCCATGCAACAGCAGCGACTGCATCGTGGTGGACACGGTGATGTGTCCCAACA
TGCCCAACAAAAGCGTCCTGCTCTACACGCTCTCCTTCATTTACATTTTCATCTTC
GTCATCGGCATGATTGCCAACTCCGTGGTGGTCTGGGTGAATATCCAGGCCAAGA
CCACAGGCTATGACACGCACTGCTACATCTTGAACCTGGCCATTGCCGACCTGTG
GGTTGTCTCACCATCCCAGTCTGGGTGGTCACTCTCGTGCAGCACAAACAGTGG

CCCATGGGCGAGCTCACGTGCAAAGTCACACACCTCATCTTCTCCATCAACCTCT
TCAGCGGCATTTTCTTCCTCACGTGCATGAGCGTGGACCGCTACCTCTCCATCACC
TACTTCACCAACACCCCCAGCAGCAGGAAGAAGATGGTACGCCGTGTCGTCTGC
ATCCTGGTGTGGCTGCTGGCCTTCTGCGTGTCTCTGCCTGACACCTACTACCTGAA
5 GACCGTCACGTCTGCGTCCAACAATGAGACCTACTGCCGGTCTTCTACCCCGAG
CACAGCATCAAGGAGTGGCTGATCGGCATGGAGCTGGTCTCCGTTGTCTTGGGCT
TTGCCGTTCCCTTCTCCATTATCGCTGTCTTCTACTTCCTGCTGGCCAGAGCCATC
TCGGCGTCCAGTGACCAGGAGAAGCACAGCAGCCGGAAGATCATCTTCTCCTAC
GTGGTGGTCTTCCCTTGTCTGCTGGCTGCCCTACCACGTGGCGGTGCTGCTGGACA
10 TCTTCTCCATCCTGCACTACATCCCTTTCACCTGCCGGCTGGAGCACGCCCTCTTC
ACGGCCCTGCATGTCACACAGTGCCTGTGCTGGTGCCTGCTGCGTCAACCCTG
TCCTCTACAGCTTCATCAATCGCAACTACAGGTACGAGCTGATGAAGGCCTTCAT
CTTCAAGTACTCGGCCAAAACAGGGCTCACCAAGCTCATCGATGCCTCCAGAGTG
TCGGAGACGGAGTACTCCGCCTTGGAGCAAAACGCCAAG

15 SEQ ID NO: 315

>gi|183866|gb|M60278.1|HUMHBEGF Human heparin-binding EGF-like growth factor
mRNA, complete cds

GCTACGCGGGCCACGCTGCTGGCTGGCCTGACCTAGGCGCGCGGGGTCCGGGCGG
20 CCGCGCGGGCGGGCTGAGTGAGCAAGACAAGACACTCAAGAAGAGCGAGCTGC
GCCTGGGTCCCGGCCAGGCTTGACGCGAGAGGCGGGCGGCAGACGGTGCCCGGC
GGAATCTCCTGAGCTCCGCCGCCAGCTCTGGTGCCAGCGCCAGTGGCCGCGGC
TTCGAAAGTGACTGGTGCCTCGCCGCCTCCTCTCGGTGCGGGACCATGAAGCTGC
TGCCGTCGGTGGTGTGAAGCTCTTCTGGCTGCAGTTCTCTCGGCACTGGTGACT
25 GGCAGAGCCTGGAGCGGCTTCGGAGAGGGCTAGCTGCTGGAACCAGCAACCCG
GACCCTCCCACTGTATCCACGGACCAGCTGCTACCCCTAGGAGGCGGCCGGGAC
CGGAAAGTCCGTGACTTGCAAGAGGCAGATCTGGACCTTTTGAGAGTCACTTTAT
CCTCCAAGCCACAAGCACTGGCCACACCAAAACAAGGAGGAGCACGGGAAAAGA
AAGAAGAAAGGCAAGGGGCTAGGGAAGAAGAGGGACCCATGTCTTCGGAAATA
30 CAAGGACTTCTGCATCCATGGAGAATGCAAATATGTGAAGGAGCTCCGGGCTCC
CTCCTGCATCTGCCACCCGGGTTACCATGGAGAGAGGTGTCATGGGCTGAGCCTC
CCAGTGGAATAATCGCTTATATACCTATGACCACACAACCATCCTGGCCGTGGTGG
CTGTGGTGTGTCATCTGTCTGTCTGCTGGTCATCGTGGGGCTTCTCATGTTTAGG
TACCATAGGAGAGGAGGTTATGATGTGGAAAATGAAGAGAAAGTGAAGTTGGGC
35 ATGACTAATTCCCACTGAGAGAGACTTGTGCTCAAGGAATCGGCTGGGGACTGCT
ACCTCTGAGAAGACACAAGGTGATTTACAGACTGCAGAGGGGAAAGACTTCCATC
TAGTCACAAAGACTCCTTCGTCCCCAGTTGCCGTCTAGGATTGGGCCTCCATAA
TTGCTTTGCCAAAATACCAGAGCCTTCAAGTGCCAAACAGAGTATGTCCGATGGT
ATCTGGGTAAAGAAGAAAGCAAAAGCAAGGGACCTTCATGCCCTTCTGATTCCTCT
40 CCACCAAACCCCACTTCCCCTCATAAGTTTGTTTAAACACTTATCTTCTGGATTAG
AATGCCGGTTAAATTCCATATGCTCCAGGATCTTTGACTGAAAAAAAAAAGAA
GAAGAAGAAGGAGAGCAAGAAGGAAAGATTTGTGAAGTGAAGAAAGCAACAA
AGATTGAGAAGCCATGTACTCAAGTACCACCAAGGGATCTGCCATTGGGACCCT
CCAGTGCTGGATTTGATGAGTTAACTGTGAAATAACCACAAGCCTGAGAAGTGAAT
45 TTTGGGACTTCTACCCAGATGGAAAAATAACAACCTATTTTTGTTGTTGTTGTTGT
AAATGCCTCTTAAATTATATATTTATTTTATTCTATGTATGTTAATTTATTTAGTTT
TTAACAATCTAACAATAATTTCAAGTGCCTAGACTGTTACTTTGGCAATTTCTT
GGCCCTCCACTCCTCATCCCCACAATCTGGCTTAGTGCCACCCACCTTTGCCACA
AAGCTAGGATGGTTCTGTGACCCATCTGTAGTAATTTATTGTCTGTCTACATTTCT

GCAGATCTTCCGTGGTCAGAGTGCCACTGCGGGAGCTCTGTATGGTCAGGATGTA
 GGGGTAACTTGGTCAGAGCCACTCTATGAGTTGGACTTCAGTCTTGCCTAGGCG
 ATTTTGTCTACCATTTGTGTTTTGAAAGCCCAAGGTGCTGATGTCAAAGTGTAAC
 AGATATCAGTGTCTCCCCGTGTCCTCTCCCTGCCAAGTCTCAGAAGAGGTTGGGC
 5 TTCCATGCCTGTAGCTTTTCTGGTCCCTCACCCCCATGGCCCCAGGCCACAGCGT
 GGGAACTCACTTTCCCTTGTGTCAAGACATTTCTCTAACTCCTGCCATTCTTCTGG
 TGCTACTCCATGCAGGGGTGAGTGCAGCAGAGGACAGTCTGGAGAAGGTATTAG
 CAAAGCAAAAGGCTGAGAAGGAACAGGGAACATTGGAGCTGACTGTTCTTGGTA
 ACTGATTACCTGCCAATTGCTACCGAGAAGGTTGGAGGTGGGGAAGGCTTTGTAT
 10 AATCCACCCACCTCACCAAAACGATGAAGGTATGCTGTATGGTCTTTCTGGA
 AGTTTCTGGTGCCATTTCTGAACTGTTACAACCTTGATTTCCAAACCTGGTTCATA
 TTTATACTTTGCAATCCAAATAAAGATAACCCTTATTCCATAAAAAAAAAAAAAA
 AAAA

15 SEQ ID NO: 316

>gi|179664|gb|K02765.1|HUMC3 Human complement component C3 mRNA, alpha and beta subunits, complete cds

CTCCTCCCCATCCTCTCCCTCTGTCCCTCTGTCCCTCTGACCCTGCACTGTCCCAG
 CACCATGGGACCCACCTCAGGTCCCAGCCTGCTGCTCCTGCTACTAACCACCTC
 20 CCCCTGGCTCTGGGGAGTCCCATGTACTCTATCATCACCCCCAACATCTTGCGGC
 TGGAGAGCGAGGAGACCATGGTGCTGGAGGCCCCACGACGCGCAAGGGGATGTTT
 CAGTCACTGTTACTGTCCACGACTTCCCAGGCAAAAACTAGTGCTGTCCAGTGA
 GAAGACTGTGCTGACCCCTGCCACCAACACATGGGCAACGTCACCTTCACGATC
 CCAGCCAACAGGGAGTTCAAGTCAGAAAAGGGGGCGCAACAAGTTCGTGACCGTG
 25 CAGGCCACCTTCGGGAGCCAAGTGGTGGAGAAGGTGGTGCTGGTCAGCCTGCAG
 AGCGGGTACCTCTTCATCCAGACAGACAAGACCATCTACACCCCTGGCTCCACAG
 TTCTCTATCGGATCTTCACCGTCAACCACAAGCTGCTACCCGTGGGCGGACGGT
 CATGGTCAACATTGAGAACCCGGAAGGCATCCCGGTCAAGCAGGACTCCTTGTCT
 TCTCAGAACCAGCTTGGCGTCTTGCCCTTGTCTTGGGACATTCCGGAACCTCGTCA
 30 ACATGGGCCAGTGGAAGATCCGAGCCTACTATGAAAACCTACCACAGCAGGTCT
 TCTCCACTGAGTTTGAGGTGAAGGAGTACGTGCTGCCCAGTTTCGAGGTCATAGT
 GGAGCCTACAGAGAAATTCTACTACATCTATAACGAGAAGGGCCTGGAGGTCAC
 CATCACCGCCAGGTTCTCTACGGGAAGAAAGTGGAGGGAACCTGCCTTTGTCATC
 TTCGGGATCCAGGATGGCGAACAGAGGATTTCCCTGCCTGAATCCCTCAAGCGCA
 35 TTCCGATTGAGGATGGCTCGGGGGAGGTTGTGCTGAGCCGGAAGGTACTGCTGG
 ACGGGGTGCAGAACCTCCGAGCAGAAGACCTGGTGGGGAAGTCTTTGTACGTGT
 CTGCCACCGTCATCTTGCACTCAGGCAGTGACATGGTGCAGGCAGAGCGCAGCG
 GGATCCCCATCGTGACCTCTCCCTACCAGATCCACTTCACCAAGACACCCAAGTA
 CTTCAAACCAGGAATGCCCTTTGACCTCATGGTGTTCGTGACGAACCCTGATGGC
 40 TCTCCAGCCTACCGAGTCCCCGTGGCAGTCCAGGGCGAGGACACTGTGCAGTCTC
 TAACCCAGGGAGATGGCGTGGCCAACTCAGCATCAACACACACCCAGCCAGA
 AGCCCTTGAGCATCACGGTGCACGAAGAAGCAGGAGCTCTCGGAGGCAGAGC
 AGGCTACCAGGACCATGCAGGCTCTGCCCTACAGCACCGTGGGCAACTCCAACA
 ATTACCTGCATCTCTCAGTGCTACGTACAGAGCTCAGACCCGGGGAGACCCTCAA
 45 CGTCAACTTCCTCCTGCGAATGGACCGCGCCACGAGGCCAAGATCCGCTACTAC
 ACCTACCTGATCATGAACAAGGGCAGGCTGTTGAAGGCGGGACGCCAGGTGCGA
 GAGCCCGGCCAGGACCTGGTGGTGTGCTGCCCTGTCCATCACCACCGACTTCATCC
 CTTCTTCCGCCTGGTGGCGTACTACACGCTGATCGGTGCCAGCGGCCAGAGGGA
 GGTGGTGGCCGACTCCGTGTGGGTGGACGTCAAGGACTCCTGCGTGGGCTCGCTG

GTGGTAAAAAGCGGCCAGTCAGAAGACCGGCAGCCTGTACCTGGGCAGCAGATG
ACCCTGAAGATAGAGGGTGACCACGGGGCCCGGGTGGTACTGGTGGCCGTGGAC
AAGGGCGTGTTCGTGCTGAATAAGAAGAACTGACGCAGAGTAAGATCTGG
GACGTGGTGGAGAAGGCAGACATCGGCTGCACCCCGGGCAGTGGGAAGGATTAC
5 GCCGGTGTCTTCTCCGACGCAGGGCTGACCTTCACGAGCAGCAGTGGCCAGCAG
ACCGCCCAGAGGGCAGAACTTCAGTGCCCGCAGCCAGCCGCCCGCCGACGCCGT
TCCGTGCAGCTCACGGAGAAGCGAATGGACAAAGTCGGCAAGTACCCCAAGGAG
CTGCGCAAGTGCTGCGAGGACGGCATGCGGGAGAACCCCATGAGGTTCTCGTG
CAGCGCCGGACCCGTTTCATCTCCCTGGGCGAGGCGTGCAAGAAGGTCTTCCTGG
10 ACTGCTGCAACTACATCACAGAGCTGCGGCGGCAGCACGCGCGGGCCAGCCACC
TGGGCCTGGCCAGGAGTAACCTGGATGAGGACATCATTGCAGAAGAGAACATCG
TTTCCCGAAGTGAGTTCCCAGAGAGCTGGCTGTGGAACGTTGAGGACTTGAAAG
AGCCACCGAAAAATGGAATCTCTACGAAGCTCATGAATATATTTTTGAAAGACTC
CATCACCACGTGGGAGATTCTGGCTGTCAGCATGTCCGACAAGAAAGGGATCTG
15 TGTGGCAGACCCCTTCGAGGTCACAGTAATGCAGGACTTCTTCATCGACCTGCGG
CTACCCTACTCTGTTGTTTCGAAACGAGCAGGTGGAAATCCGAGCCGTTCTCTACA
ATTACCGGCAGAACCAAGAGCTCAAGGTGAGGGTGGAACTACTCCACAATCCAG
CCTTCTGCAGCCTGGCCACCACCAAGAGGCGTCACCAGCAGACCGTAACCATCCC
CCCCAAGTCCTCGTTGTCCGTTCCATATGTCATCGTGCCGCTAAAGACCGGCCTG
20 CAGGAAGTGGAAGTCAAGGCTGCCGTCTACCATCATTTTCATCAGTGACGGTGTCA
GGAAGTCCCTGAAGGTCGTGCCGGAAGGAATCAGAATGAACAAAATGTGGCTG
TTCGCACCCCTGGATCCAGAACGCCTGGGCCGTGAAGGAGTGCAGAAAGAGGACA
TCCCACCTGCAGACCTCAGTGACCAAGTCCCGGACACCGAGTCTGAGACCAGAA
TCTCTCTGCAAGGGACCCAGTGGCCAGATGACAGAGGATGCCGTGACGCGGG
25 AACGGCTGAAGCACCTCATTGTGACCCCTCGGGCTGCGGGGAACAGAACATGA
TCGGCATGACGCCCACGGTCATCGCTGTGCATTACCTGGATGAAACGGAGCAGT
GGGAGAAGTTCGGCCTAGAGAAGCGGCAGGGGGCCTTGGAGCTCATCAAGAAG
GGGTACACCCAGCAGCTGGCCTTCAGACAACCCAGCTCTGCCTTTGCGGCCTTCG
TGAAACGGGCACCCAGCACCTGGCTGACCGCCTACGTGGTCAAGGTCTTCTCTCT
30 GGCTGTCAACCTCATCGCCATCGACTCCCAAGTCCTCTGCGGGGCTGTTAAATGG
CTGATCCTGGAGAAGCAGAAGCCCGACGGGGTCTTCCAGGAGGATGCGCCCGTG
ATACACCAAGAAATGATTGGTGGATTACGGAACAACAACGAGAAAGACATGGCC
CTCACGGCCTTTGTTCTCATCTCGCTGCAGGAGGCTAAAGATATTTGCGAGGAGC
AGGTCAACAGCCTGCCAGGCAGCATCACTAAAGCAGGAGACTTCCTTGAAGCCA
35 ACTACATGAACCTACAGAGATCCTACACTGTGGCCATTGCTGGCTATGCTCTGGC
CCAGATGGGCAGGCTGAAGGGGCCTCTTCTTAACAAATTTCTGACCACAGCCAA
AGATAAGAACCGCTGGGAGGACCCTGGTAAGCAGCTCTACAACGTGGAGGCCAC
ATCCTATGCCCTCTTGGCCCTACTGCAGCTAAAAGACTTTGACTTTGTGCCTCCCG
TCGTGCGTTGGCTCAATGAACAGAGATACTACGGTGGTGGCTATGGCTCTACCCA
40 GGCCACCTTCATGGTGTTCCAAGCCTTGGCTCAATACCAAAAGGACGCCCTGAC
CACCAGGAACCTGAACCTTGATGTGTCCCTCCAAGTGGCCAGCCGCAGCTCCAAGA
TCACCCACCGTATCCACTGGGAATCTGCCAGCCTCCTGCGATCAGAAGAGACCAA
GGAAAATGAGGGTTTCACAGTCACAGCTGAAGGAAAAGGCCAAGGCACCTTGTC
GGTGGTGACAATGTACCATGCTAAGGCCAAAGATCAACTCACCTGTAATAAATTC
45 GACCTCAAGGTCACCATAAAACCAGCACCGGAAACAGAAAAGAGGCCTCAGGAT
GCCAAGAACACTATGATCCTTGAGATCTGTACCAGGTACCGGGGAGACCAGGAT
GCCACTATGTCTATATTGGACATATCCATGATGACTGGCTTTGCTCCAGACACAG
ATGACCTGAAGCAGCTGGCCAATGGTGTGACAGATACATCTCCAAGTATGAGCT
GGACAAAGCCTTCTCCGATAGGAACACCCTCATCATCTACCTGGACAAGGTCTCA

CACTCTGAGGATGACTGTCTAGCTTTCAAAGTTCACCAATACTTTAATGTAGAGC
 TTATCCAGCCTGGAGCAGTCAAGGTCTACGCCTATTACAACCTGGAGGAAAGCTG
 TACCCGGTTCTACCATCCGGAAAAGGAGGATGGAAAGCTGAACAAGCTCTGCCG
 TGATGAACTGTGCCGCTGTGCTGAGGAGAATTGCTTCATACAAAAGTCGGATGAC
 5 AAGGTCACCCTGGAAGAACGGCTGGACAAGGCCTGTGAGCCAGGAGTGGACTAT
 GTGTACAAGACCCGACTGGTCAAGGTTCAAGCTGTCCAATGACTTTGACGAGTACA
 TCATGGCCATTGAGCAGACCATCAAGTCAGGCTCGGATGAGGTGCAGGTTGGAC
 AGCAGCGCACGTTTCATCAGCCCCATCAAGTGCAGAGAAGCCCTGAAGCTGGAGG
 AGAAGAAACACTACCTCATGTGGGGTCTCTCCTCCGATTTCTGGGGAGAGAAGCC
 10 CAACCTCAGCTACATCATCGGGAAGGACACTTGGGTGGAGCACTGGCCTGAGGA
 GGACGAATGCCAAGACGAAGAGAACCAGAAACAATGCCAGGACCTCGGCGCCTT
 CACCGAGAGCATGGTTGTCTTTGGGTGCCCCAACTGACCACACCCCCATTCC

SEQ ID NO: 317

15 >gi|2185691|gb|AA460571.1|AA460571 zx60a08.r1 Soares_testis_NHT Homo sapiens
 cDNA clone IMAGE:795830 5' similar to gb:M95724 CENTROMERE PROTEIN C
 (HUMAN);, mRNA sequence

AAAGTTTTGCCAGTAGATCTTGGATTACAATACCAAGAAAGGCAGGGTCTCTGA
 AACACGCACAATATCCCCGGCTGAGAGCACTGCACTCCTTCAAGGTAGAAAGT
 20 CAAGAGAAAAGCATCATAATATATTACCTAAGACTTTGGCAAATGACAAACATT
 CCCATAAACCTCACCCAGTAGAGACATCTCAGCCCTCTGATAAAACAGTACTGGA
 TACAAGTTATGCTTTGATAGGTGAAACAGTAAATAATTATAGATCTACAAAATAT
 GAAATGTATTCGAAGAATGCAGAAAACCATCTAGAAGCAAAAGGACTATAAAA
 CAAAAACAGGAGAGAAGAAATTCATGGCTAAACCAGCTGAAGAACAGCTTGATGTG
 25 GGACAGTCTAAAGATGAAAACATACATACATCACATATTACCCANGACGAATTT
 CAAAGAAATTCAGACAGAAAATATGGAAGAGCCTGAAGAGATTGGGAAATGATT
 GTGGTTCCAAAAAACAGATGCCACCTGTGGGAAGCCAGAAAGGTAGCACTGAAA
 AGATTGGGGGATTCTTAAAGGAGCGCTTTTCAGT

30 SEQ ID NO: 318

>1226731H1

CTCCTCTGGCAGAACCTCGGCTCTCAGGAGGTCCTTGTTCAGGGAACAGCTGCT
 TCTCT
 GGGGCTGGGCTCTACTCCCTGCAGCCCCTCGCACTACCCAGCTGGAACCAGGGAC
 35 AACGC
 CTGAGTCCAACCCTCGTGTCTATTTTCCAGAAAACGGGCAATGCTGTGAGAGCCA
 TTGGA
 AGACTGTCCTCTATGGCAATGATCTCAGGGCTCAGTGGCAGGAAATCCTCAACAG
 G

40

SEQ ID NO: 319

>874 BLOOD 239973.4 D13645 g286008 Human mRNA for KIAA0020 gene, complete cds.
 0

CGGAGAGGCGGTTCGGGATCCGCTGCGCGAGCTGTCTCGGTCCCACGTGTGCGAG
 45 TTGCTACGATGGAAGTTAAAGGGAAAAAGCAATTCACAGGAAAGAGTACAAAG
 ACAGCACAAGAAAAAACAGATTTTATAAAAAATAGTGATTCTGGTTCTTCAAAG
 ACATTTCCAACAAGGAAAGTTGCTAAAGAAGGTGGACCTAAAGTCACATCTAGG
 AACTTTGAGAAAAGTATCACAAAACCTTGGGAAAAAGGGTGTAAGCAGTTCAAG
 AATAAGCAGCAAGGGGACAAATCACCAAGAACAATTCAGCCGGCAAATAA

ATTCAACAAGAAGAGAAAATTCCAGCCAGATGGTAGAAGCGATGAATCAGCAGC
CAAGAAGCCCAAATGGGATGACTTCAAAAAGAAGAAGAAAGAACTGAAGCAAA
GCAGACAACCTCAGTGATAAAACCAACTATGACATTGTTGTTTCGGGCAAAGCAGA
TGTGGGAGATTTTAAGAAGAAAAGACTGTGACAAAGAAAAAAGAGTAAAGTTA
5 ATGAGTGATTTGCAGAAGTTGATTCAAGGGAAAATTA AAACTATTGCATTTGCAC
ACGATTCAACTCGTGTGATCCAGTGTTACATTCAGTATGGTAATGAAGAACAGAG
AAAACAGGCTTTTGAAGAATTGCGAGATGATTTGGTTGAGTTAAGTAAAGCCAA
ATATTGAGAAATATTGTTAAGAAATTTCTCATGTATGGAAGTAAACCACAGATT
GCAGAGATAATCAGAAGTTTAAAGGCCACGTGAGGAAGATGCTGCGGCATGCG
10 GAAGCATGCAGCCATCGTGGAGTACGCATACAATGACAAAGCCATTTTGGAGCA
GAGGAACATGCTGACGGAAGAGCTCTATGGGAACACATTTTCAGCTTTACAAGTC
AGCAGATCACCCAACTCTGGACAAAGTGTTAGAGGTACAGCCAGAAAAATTAGA
ACTTATTATGGATGAAATGAAACAGATTCTAACTCCAATGGCCCAAAGGAAGC
TGTGATTAAGCACTCATTGGTGCATAAAGTATTCTTGGACTTTTTTACCTATGCAC
15 CCCCCAACTCAGATCAGAAATGATTGAAGCCATCCGCGAAGCGGTGGTCTACC
TGGCACACACACACGATGGCGCCAGAGTGGCCATGCACTGCCTGTGGCATGGCA
CGCCCAAGGACAGGAAAGTGATTGTGAAAACAATGAAGACTTATGTTGAAAAGG
TGGCTAATGGCCAATACTCCCATTTGGTTTTACTGGCGGCATTTGATTGTATTGAT
GATACTAAGCTTGTGAAGCAGATAATCATATCAGAAATTATCAGTTCATTGCCTA
20 GCATAGTAAATGACAAATATGGAAGGAAGGTCCTATTGTACTTACTAAGCCCCA
GAGATCCTGCACATACAGTACGAGAAATCATTGAAGTTCTGCAAAAAGGAGATG
GAAATGCACACAGTAAGAAAGATACAGAGGTCCGCGAGACGGGAGCTCCTAGAAT
CCATTTCTCCAGCTTTGTTAAGCTACCTGCAAGAACATGCCCAAGAAAGTGGTGCT
TAGATAAGTCTGCGTGTGTGTTGGTGTCTGACATTCTGGGATCTGCCACTGGAGAC
25 GTTCAGCCTACCATGAATGCCATCGCCAGCTTGGCAGCAACAGGACTGCATCCTG
GTGGCAAGGACGGAGAGCTTCACATTGCAGAACATCCTGCAGGACATCTAGTTC
TGAAGTGGTTAATAGAGCAAGATAAAAAGATGAAAGAAAATGGGAGAGAAGGT
TGTTTTGCAAAAACACTTGTAGAGCATGTTGGTATGAAGAACCTGAAGTCCTGGG
CTAGTGTAATCGAGGTGCCATTATTCTTTCTAGCCTCCTCCAGAGTTGTGACCTG
30 GAAGTTGCAAAACAAAGTCAAAGCTGCACTGAAAAGCTTGATTCTTACATTGGAA
AAAACCAAAAGCACCAGCAAAGGAATAGAAATTCTACTTGAAAACTGAGCACA
TAGGTGGAAAGAGTTAAGAGCAAGATGGAATGATTTTTTCTGTTCTCTGTTCTGT
TTCCAATGCAGAAAAGAAGGGGTAGGGTCCACCATACTGGTAATTGGGGTACT
CTGTATATGTGTTTCTTCTTTGTATACGAATCTATTTATATAAATTGTTTTTTTAAA
35 TGGTCTTTTTT

SEQ ID NO: 320

>gi|30125|emb|X54925.1|HSCOLL1 H.sapiens mRNA for type I interstitial collagenase

40 ATATTGGAGTAGCAAGAGGCTGGGAAGCCATCACTTACCTTGCACTGAGAAAGA
AGACAAAGGCCAGTATGCACAGCTTTCCTCCACTGCTGCTGCTGCTGTTCTGGGG
TGTGGTGTCTCACAGCTTCCCAGCGACTCTAGAAACACAAGAGCAAGATGTGGA
CTTAGTCCAGAAATACCTGGAAAAATACTACAACCTGAAGAATGATGGGAGGCA
AGTTGAAAAGCGGAGAAATAGTGGCCCAAGTGGTTGAAAAATTGAAGCAAATGCA
45 GGAATTCTTTGGGCTGAAAGTGACTGGGAAACCAGATGCTGAAACCCTGAAGGT
GATGAAGCAGCCCAGATGTGGAGTGCCTGATGTGGCTCAGTTTGTCTCACTGAG
GGGAACCCTCGCTGGGAGCAAACACATCTGACCTACAGGATTGAAAATTACACG
CCAGATTTGCCAAGAGCAGATGTGGACCATGCCATTGAGAAAGCCTTCCAACCTCT
GGAGTAATGTCACACCTCTGACATTCACCAAGGTCTCTGAGGGTCAAGCAGACAT

CATGATATCTTTTGTGTCAGGGGAGATCATCGGGACAACCTCTCCTTTTGATGGACCT
 GGAGGAAATCTTGCTCATGCTTTTCAACCAGGCCAGGTATTGGAGGGGGATGCTC
 ATTTTGATGAAGATGAAAGGTGGACCAACAATTTTCAGAGAGTACAACCTTACATC
 GTGTTGCGGCTCATGAACTCGGCCATTCTCTTGGAAGTCTCCCATTTCTACTGATATC
 5 GGGGCTTTGATGTACCCTAGCTACACCTTCAGTGGTGATGTTTCAGCTAGCTCAGG
 ATGACATTGATGGCATCCAAGCCATATATGGACGTTCCCAAAAATCCTGTCCAGCC
 CATCGGCCACAAACCCCAAAAAGCATGTGACAGTAAGCTAACCTTTGATGCTATA
 ACTACGATTTCGGGGAGAAGTGATGTTCTTTAAAGACAGATTCTACATGCGCACAA
 ATCCCTTCTACCCGGAAGTTGAGCTCAATTTTCATTTCTGTTTTCTGGCCACAACCTG
 10 CCAAATGGGCTTGAAGCTGCTTACGAATTTGCCGACAGAGATGAAGTCCGGTTTT
 TCAAAGGGAATAAGTACTGGGCTGTTTCAGGGACAGAATGTGCTACACGGATACC
 CCAAGGACATCTACAGCTCCTTTGGCTTCCCTAGAACTGTGAAGCATATCGATGC
 TGCTCTTTCTGAGGAAAACACTGGAAAAACCTACTTCTTTGTTGCTAACAAATAC
 TGGAGGTATGATGAATATAAACGATCTATGGATCCAGGTTATCCCAAAAATGATA
 15 GCACATGACTTTTCTGGAATTGGCCACAAAGTTGATGCAGTTTTTCATGAAAGATG
 GATTTTTCTATTTCTTTTCATGGAACAAGACAATACAAATTTGATCCTAAAACGAA
 GAGAATTTTGACTCTCCAGAAAGCTAATAGCTGGTTCAACTGCAGGAAAAATTG
 AACATTACTAATTTGAATGGAAAACACATGGTGTGAGTCCAAAGAAGGTGTTTTTC
 CTGAAGAAGTGTCTATTTTCTCAGTCATTTTTTAACCTCTAGAGTCACTGATACACA
 20 GAATATAATCTTATTTATACCTCAGTTTGCATATTTTTTTACTATTTAGAATGTAG
 CCCTTTTTGTACTGATATAATTTAGTTCCACAAATGGTGGGTACAAAAAGTCAAG
 TTTGTGGCTTATGGATTCATATAGGCCAGAGTTGCAAAGATCTTTTCCAGAGTAT
 GCAACTCTGACGTTGATCCCAGAGAGCAGCTTCAGTGACAAACATATCCTTTCAA
 GACAGAAAGAGACAGGAGACATGAGTCTTTGCCGGAGGAAAAGCAGCTCAAGA
 25 ACACATGTGCAGTCACTGGTGTACCCCTGGATAGGCAAGGGATAACTCTTCTAAC
 ACAAATAAGTGTTTTATGTTTGGAAATAAAGTCAACCTTGTTTCTACTGTTTT

SEQ ID NO: 321

>gi|882877|gb|H16637.1|H16637 ym26e06.r1 Soares infant brain 1NIB Homo sapiens cDNA
 30 clone IMAGE:49164 5' similar to gb:M73255_ma1 VASCULAR CELL ADHESION
 PROTEIN 1 PRECURSOR (HUMAN);, mRNA sequence
 GCCTATACCATCCGAAAGCCCAGTTGAAGGATGCGGGAGTATATGAATGTGAAT
 CTAAAAACAAAGTTGGCTCACAATTAAGAAGTTTAACACTTGATGTTCAAGGAA
 GAGAAAACAAAGACTATTTTTCTCCTGAGCTTCTCGTGCTCTATTTTGCATCC
 35 TCCTTAATAATACCTGCCATTGGAATGATAATTTACTTTGCAAGAAAAGCCAACA
 TGAAGGGGTCATATAGTCTTGTAGAAGCACAGAAATCAAAGTGTAGCTAATGC
 TTGATATGTTCAACTGGGAGACACTATTTATCTGTGCAAATCCTTGGATACTGCTC
 ATCATTCCTTGGGGAAAAACAATGGGGCTGAGAGGGCAGACTTTCCCTGGATGT
 ATTTGGAAGTGGGGAAAGGAAATGCCCTCTATGGTCCCTTGGCTGTGGAGCCA
 40 GGAAGTCCAAAGTTAAACTTGGNTGCCNGGAAGGGACNGTTAACCGGCCNTCA
 GGTGNGGGGGACTGGG

SEQ ID NO: 322

>2496910H1

45 CTTAGACTGGGGCTCGGCCTCGCTCTGAAAAGTGCTTAAGAAAATCTTCTCAGTT
 CTCCTTGCAGAGGACTGGCGCCGGGACGCGAAGAGCAACGGGCGCTGCACAAAG
 CGGGCGCTGTGCGTGGTGGAGTGCGCATGTACGCGCAGGCGCTTCTCGTGGTTGG
 CGTGCTGCAGCGACAGGCGGCAGCACAGCACCTGCACGAACACCCGCCGAACT

GCTGCGAGGACACCGTGTACAGGAGCGGGTTGATGACCGAGCTGAGGTAGAAAA
ACGTCTCCGAGAAGGGGAGGAGGATCATGTACGCCCCG

SEQ ID NO: 323

5 >3558269H1

CAGATCCAAGGAGAAAGTCAGGGGCCAGTGCGCGCTACAGCCAGCGCCCAGTAC
CGCGGTGTGATGGGCACCATTTCTGACCATGGTGCGTACTGAGGGCCCCCGAAGC
CTCTACAATGGGCTGGTTGCCGGCCTGCAGCGCCAAATGAGCTTTGCCTCTGTCC
GCATCGGCCTGTATGATTCTGTCAAACAGTTCTACACCAAGGGCTCTGAGCATGC
10 CAGCATTGGGAGCCGCCTCCTAGCAGGCAGCACCACAGGTGCCCTGGCTGTGGC
TGTGAGCCAGCCCACGGA

SEQ ID NO: 324

15 >gi|718888|gb|T90375.1|T90375 yd43e04.s1 Soares fetal liver spleen 1NFLS Homo sapiens
cDNA clone IMAGE:111006 3', mRNA sequence

ATNATTTTTGTAGGTACAATAAATCTGATTGATTTTTATTACACATCTTAGTTTAG
AATCACTTTTACATTCCTAGACAAAGAGATGATACAAATAAATATCAATTGTAAA
ACTTAGAGCCCCAAGTATTGATTGGCGTATTCTTTGTCTAAAGGTAGCCAAAGAG
AAGGTCAAGATCAGTAATAACTTCAAGGAGCCATGAAGCCCACTGCCTCCTGCCT
20 GCCCCAGGGATCACTCCTTTCATAAATAACCCAGAGCATTTCATTACAGGGAAA
CAAGGGGCAGGCAGGAAAGGGTGACAGNTTCTGGAACAGGTACCAAAACAAG
GCCTTGCGTGGATAGGACAATCACCNNGGGNCCACTTTTTCTTTGGGGCCAGGTTCT
CCTCAGGGGGCCTTTTTT

25 SEQ ID NO: 325

>gi|2197196|gb|U81233.1|HSU81233 Human cystatin E mRNA, complete cds

CCGACGGCACTGACGGCCATGGCGCGTTTCGAACCTCCCGCTGGCGCTGGGCCTG
GCCCTGGTCGCATTCTGCCTCCTGGCGCTGCCACGCGATGCCCGGGCCCGGCCGC
AGGAGCGCATGGTTCGGAGAACTCCGGGACCTGTGCGCCGACGACCCGCGAGGTGC
30 AGAAGGCGGCGCAGGCGGCCGTGGCCAGCTACAACATGGGCAGCAACAGCATCT
ACTACTTCCGAGACACGCACATCATCAAGGCGCAGAGCCAGCTGGTGGCCGGCA
TCAAGTACTTCCTGACGATGGAGATGGGGAGCACAGACTGCCGCAAGACCAGGG
TCACTGGAGACCACGTCGACCTCACCCTTGGCCCTGGCAGCAGGGGCGCAGC
AGGAGAAGCTGCGCTGTGACTTTGAGGTCCTTGTGGTTCCCTGGCAGAACTCCTC
35 TCAGCTCCTAAAGCACAACTGTGTGCAGATGTGATAAGTCCCCGAGGGCGAAGG
CCATTGGGTTTGGGGCCATGGTGGAGGGCACTTCACGTCCGTGGGCCGTATCTGT
CACAATAAATGGCCAGTGCTGCTTCTTGCAAAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 326

40 >gi|199842|gb|M84683.1|MUSMUC1A Mus musculus episialin (Muc1) mRNA, complete
cds

TGTTCAACCACCACCATGACCCCGGGCATTTCGGGCTCCTTTCTTCCTGCTGCTACTT
CTAGCAAGTCTAAAAGGTTTTCTTGCCCTTCCAAGTGAGGAAAACAGTGTACCT
CATCTCAGGACACCAGCAGTTCTTAGCATCGACTACCACTCCAGTCCACAGCAG
45 CAACTCAGACCCAGCCACCAGACCTCCAGGGGACTCCACCAGCTCTCCAGTCCA
GAGTAGCACCTCTTCTCCAGCCACCAGAGCTCCTGAAGACTCTACCAGTACTGCA
GTCCTCAGTGGCACCTCCTCCCCAGCCACCACAGCTCCAGTGAAGTCCGCCAGCT
CTCCAGTAGCCCATGGTGACACCTCTTCCCCAGCCACTAGCCTTTCAAAGACTC
CAACAGCTCTCCAGTAGTCCACAGTGGCACCTCTTCAGCTCCGGCCACCACAGCT

CCAGTGGATTCCACCAGCTCTCCAGTAGTCCACGGTGGTACCTCGTCCCCAGCCA
 CCAGCCCTCCAGGGGACTCCACCAGCTCTCCAGACCATAGTAGCACCTCTTCTCC
 AGCCACCAGAGCTCCCGAAGACTCTACCAGTACTGCAGTCCTCAGTGGCACCTCC
 TCCCCAGCCACCACAGCTCCAGTGGACTCCACCAGCTCTCCAGTAGCCCATGATG
 5 ACACCTCTTCCCCAGCCACTAGCCTTTCAGAAGACTCCGCCAGCTCTCCAGTAGC
 CCACGGTGGCACCTCTTCTCCAGCCACCAGCCCTCTAAGGGACTCCACCAGTTCT
 CCAGTCCACAGTAGTGCTCCATCCAAAACATCAAGACTACATCAGACTTAGCTA
 GCACTCCAGACCACAATGGCACCTCAGTCACAACCTACCAGCTCTGCACTGGGCTC
 AGCCACCAGTCCAGACCACAGTGGTACCTCAACTACAACCTAACAGCTCTGAATC
 10 AGTCTTGGCCACCCTCCAGTTTACAGTAGCATGCCATTCTCTACTACCAAAGTG
 ACGTCAGGCTCAGCTATCATTCCAGACCACAATGGCTCCTCGGTGCTACCTACCA
 GTTCTGTGTTGGGCTCAGCTACCAGTCTAGTCTATAATACCTCTGCAATAGCTAC
 AACTCCAGTCAGCAATGGCACTCAGCCTTCAGTGCCAAGTCAATACCCTGTTTCT
 CCTACCATGGCCACCACCTCCAGCCACAGCACTATTGCCAGCAGCTCTTACTATA
 15 GCACAGTACCATTTTCTACCTTCTCCAGTAACAGTTCACCCCAGTTGTCTGTTGGG
 GTCTCCTTCTTCTTCTTGTCTTTTTACATTCAAAACCACCCATTTAATTCTTCTG
 GAAGACCCAGCTCCAATACTACCAAGAACTGAAGAGGAACATTTCTGGATTG
 TTTCTGCAGATTTTAAACGGAGATTTTCTGGGGATCTCTAGCATCAAGTTCAGGTC
 AGGCTCCGTGGTGGTAGAATCGACTGTGGTTTTCCGGGAGGGTACTTTTAGTGCC
 20 TCTGACGTGAAGTCACAGCTTATACAGCATAAGAAGGAGGCAGATGACTATAAT
 CTGACTATTTCAAGTCAAAGTGAATGAGATGCAGTTCCCTCCCTCTGCCCAGT
 TCCCGGCCGGGGGTACCAGGCTGGGGCATTGCCCTGCTGGTGCTGGTCTGTATTTT
 TGGTGTCTTTGGCTATCGTCTATTTCCCTTGCCCTGGCAGTGTGCCAGTGCCGGCCGAA
 AGAGCTATGGGCAGCTGGACATCTTTCCAACCCAGGACACCTACCATCCTATGAG
 25 TGAATACCCTACCTACCACACTCACGGACGCTACGTGCCCCCTGGCAGTACCAAG
 CGTAGCCCCTATGAGGAGGTTTCGGCAGGTAATGGCAGTAGCAGTCTCTCTTATA
 CCAACCCAGCTGTGGTGACCACTTCTGCCAACTTGTAGGAGCAAGTCACCCCACC
 CACTTGGGGCAGCTTTGGCGGTCTGCTCCCTCAGTGGTCACTGCCAGACCCCTGC
 ACTCTGATCTGGGCTGGTGAGCCAGGACTTCTGGTAGGCTGTTTCATGCCCTTTGT
 30 CAAGCGCCTCAACTACGTAAGCCTGGTGAAGCCCAGCCCTGCCCTGGGGGACAC
 TGGGGCAGTTAGTGGTGGCTCTCAGAAGGACTGGCCTGGAAAACCTGGAGACAGG
 GATGGGAACCCAAACATAGCT

SEQ ID NO: 327

35 >1484836T6
 TGCTATTCCATGTATGTCATAGGTGTGAAACCTTAAATCTTTCCAACAGCCACTG
 CCTTATGGAGACTGTATCATCCTTATCTTCATCTTACAGGTGAGAAATCTGCAGT
 GAAGAAAGGTACATCCCAAGGGGACACCGACAGTAAGCAGCGGACTGGGGATT
 CCAGACACGTGGCTGGNCCTCTGCAGGAAGAAATCAAACGTGTGGAAGGGTTGG
 40 GGAGAGGAGATGCCTAGAAGGGATTTTCCTGTATTCTCTTAGTGGTGGGGGTAA
 ACCGAGGACCCAAGTCCTCACTCATCACGTCCTCCCCAGTGATGCAAGGATGGA
 GCTGGGGTAAAACCAGGGAGAATCAGGACCCTCACGTCGCTGCGTTTATTAAGC
 ATCAGGGTCAGAGCTGGGCAGGNNANGNGGGGAGGCAAGGTCTAGGTGAGAGA
 CGTTCTGGAACCCAGCCAGTGGGGTGGTAA

45

SEQ ID NO: 328

>gi|654754|gb|T52894.1|T52894 ya81f08.s1 Stratagene ovary (#937217) Homo sapiens
 cDNA clone IMAGE:68103 3' similar to similar to gb:M31211 MYOSIN LIGHT CHAIN 1,
 SLOW-TWITCH MUSCLE A ISOFORM (HUMAN), mRNA sequence

AAGAGAGGAACCCAGTCTTTATTTTGAACAATAGGTGGCCTCCTGGTGGCTGGA
 ACGTGCTTTTCGCTGCGGGGCCAGTGTCCGGACCCCACTGGATCTGCAGCACTC
 AGACGCTTAGGATGTGTTTCAAGAAGGCCTCGTAGTTGATGCAGCCGTTGCTGTC
 CTCGTGTCCTGCCAGAACGGTCTCCACCTCCTCCTCAGTCATCTTCTCTCCAAGGG
 5 TGGTGAGAACATGTCTGAGCTCTGCTCCCATGACTTTGCCGTTCCCTCCTTGTC
 AACACACGAAACCCCTCCAAGTAGTCCTCATATGTGCCTTGGCCTCGGTTCTTGG
 CCACTGCTGGGAGCATGGGCAGGAAAGTCTCAAAGTCCACACGCCGCGANTTCA
 GCTCATCACTCTTGGGGTTCCCAGGGACCTTGAGCACCTNNGGCGTT

10 SEQ ID NO: 329

>gi|758680|gb|M23699.1|HUMAMYSA2A Homo sapiens serum amyloid A2-alpha (SAA2)
 mRNA, complete cds

ATGAAGCTTCTCACGGGCCTGGTTTTCTGCTCCTTGGTCCTGAGTGTGAGCAGCC
 GAAGCTTCTTTTCGTTCCCTTGGCGAGGCTTTTGATGGGGCTCGGGACATGTGGAG
 15 AGCCTACTCTGACATGAGAGAAGCCAATTACATCGGCTCAGACAAATACTTCCAT
 GCTCGGGGGAACCTATGATGCTGCCAAAAGGGGACCTGGGGGTGCCTGGGGCCGCA
 GAAGTGATCAGCAATGCCAGAGAGAATATCCAGAGACTCACAGGCCATGGTGCG
 GAGGACTCGCTGGCCGATCAGGCTGCCAATAAATGGGGCAGGAGTGGCAGAGAC
 CCCAATCACTTCCGACCTGCTGGCCTGCCTGAGAAATACTGA

20

SEQ ID NO: 330

>2656 BLOOD 230638.6 U32986.g1136227 Human xeroderma pigmentosum group E UV-
 damaged DNA binding factor mRNA, complete cds: 0

GGCGGTCTAGTCCTCCTGGCCCCGGCGGTGTCCCACAGCGCCAGCTCCACCTGC
 25 TTGCCGTCCACCTCAATGTCTCTGGGGCGGAGGCAGCGGCAGTGGAGTTCGCTGC
 GCGGCTGTTGGGGGCCACCTGTCTTTTCGCTTGTGTCCCTCTTTCTAGTGTGCGGC
 TCGAGTCCCGACGGGCGCTCCAAGCCTCGACATGTCGTACAACTACGTGGTAAC
 GGCCAGAAAGCCACCGCCGTGAACGGCTGCGTGACCGGACACTTTACTTCGGC
 CGAAGACTTAAACCTGTTGATTGCCAAAACACGAGATTAGAGATCTATGTGGTC
 30 ACCGCCGAGGGGCTTCGGCCCGTCAAAGAGGTGGGCATGTATGGGAAGATTGCG
 GTCATGGAGCTTTTCAGGCCCAAGGGGGAGAGCAAGGACCTGCTGTTTATCTTGA
 CAGCGAAGTACAATGCCTGCATCCTGGAGTATAAACAGAGTGGCGAGAGCATTG
 ACATCATTACGCGAGCCCATGGCAATGTCCAGGACCGCATTGGCCGCCCTCAGA
 GACCGGCATTATTGGCATCATTGACCCTGAGTGCCGGATGATTGGCCTGCGTCTC
 35 TATGATGGCCTTTTCAAGGTTATTCCACTAGATCGCGATAATAAAGAACTCAAGG
 CCTTCAACATCCGCCTGGAGGAGCTGCATGTCATTGATGTCAAGTTCCTATATGG
 TTGCCAAGCACCTACTATTTGCTTTGTCTACCAGGACCCTCAGGGGCGGCACGTA
 AAAACCTATGAGGTGTCTCTCCGAGAAAAGGAATTCAATAAGGGCCCTTGGA
 CAGGAAAATGTCGAAGCTGAAGCTTCCATGGTGATCGCAGTCCCAGAGCCCTTTG
 40 GGGGGGCCATCATATTGGACAGGAGTCAATCACCTATCACAATGGTGACAAAT
 ACCTGGCTATTGCCCCTCCTATCATCAAGCAAAGCACGATTGTGTGCCACAATCG
 AGTGGACCCTAATGGCTCAAGATACCTGCTGGGAGACATGGAAGGCCGGCTCTT
 CATGCTGCTTTTGGAGAAGGAGGAACAGATGGATGGCACCGTCACTCTCAAGGA
 TCTCCGTGTAGAACTCCTTGGAGAGACCTCTATTGCTGAGTGCTTGACATACCTT
 45 GATAATGGTGTGTGTTTGTGCGGGTCTCGCCTGGGTGACTCCCAGCTTGTGAAGC
 TCAACGTTGACAGTAATGAACAAGGCTCCTATGTAGTGGCCATGGAAACCTTTAC
 CAACTTAGGACCCATTGTGATATGTGCGTGGTGGACCTGGAGAGGCAGGGGCA
 GGGGCAGCTGGTCACTTGTCTGGGGCTTTCAAGGAAGGTTCTTTGCGGATCATC
 CGGAATGGAATTGGAATCCACGAGCATGCCAGCATTGACTTACCAGGCATCAAA

GGATTATGGCCACTGCGGTCTGACCCTAATCGTGAGACTGATGACACTTTGGTGC
 TCTCTTTTGTGGGCCAGACAAGAGTTCTCATGTTAAATGGAGAGGAGGTAGAAG
 AAACCGAACTGATGGGTTTCGTGGATGATCAGCAGACTTTCTTCTGTGGCAACGT
 GGCTCATCAGCAGCTTATCCAGATCACTTCAGCATCGGTGAGGTTGGTCTCTCAA
 5 GAACCCAAAGCTCTGGTCAGTGAATGGAAGGAGCCTCAGGCCAAGAACATCAGT
 GTGGCCTCCTGCAATAGCAGCCAGGTGGTGGTGGCTGTAGGCAGGGCCCTCTACT
 ATCTGCAGATCCATCCTCAGGAGCTCCGGCAGATCAGCCACACAGAGATGGAAC
 ATGAAGTGGCTTGCTTGACATCACCCCATTAGGAGACAGCAATGGACTGTCCCC
 TCTTTGTGCCATTGGCCTCTGGACGGACATCTCGGCTCGTATCTTGAAGTTGCCCT
 10 CTTTTGAACTACTGCACAAGGAGATGCTGGGTGGAGAGATCATTCCTCGCTCCAT
 CCTGATGACCACCTTTGAGAGTAGCCATTACCTCCTTTGTGCCTTGGGAGATGGA
 GCGCTTTTCTACTTTGGGCTCAACATTGAGACAGGTCTGTTGAGCGACCGTAAGA
 AGGTGACTTTGGGCACCCAGCCACCGTATTGAGGACTTTTCGTTCTCTTTCTACC
 ACCAACGTCTTTGCTTGTTCTGACCGCCCCACTGTCATCTATAGCAGCAACCACA
 15 AATTGGTCTTCTCAAATGTCAACCTCAAGGAAGTGAACACATGTGTCCCCTCAA
 TTCAGATGGCTATCCTGACAGCCTGGCGCTGGCCAACAATAGCACCTCACCATT
 GGCACCATCGATGAGATCCAGAAGCTGCACATTCGCACAGTTCCCCTCTATGAGT
 CTCCAAGGAAGATCTGCTACCAGGAAGTGTCCAGTGTTCGGGGTCTCTCCAG
 CCGCATTGAAGTCCAAGACACGAGTGGGGGGCAGCAGCCTTGAGGCCAGCG
 20 CTAGCACCCAGGCTCTGTCCAGCAGTGTAAGCTCCAGCAAGCTGTTCTCCAGCAG
 CACTGCTCCTCATGAGACCTCCTTTGGAGAAGAGGTGGAGGTGCACAACCTACTT
 ATCATTGACCAACACACCTTTGAAGTGCTTCATGCCACCAGTTTCTGCAGAATG
 AATATGCCCTCAGTCTGGTTTCTGCAAGCTGGGCAAAGACCCCAACACTTACTT
 CATTGTGGGCACAGCAATGGTGTATCCTGAAGAGGCAGAGCCCAAGCAGGGTGC
 25 CATTGTGGTCTTTCAGTATTGCGATGGAAAACACAGACTGTGGCTGAAAAGGAA
 GTGAAAGGGGCCGTGTACTCTATGGTGGAAATTTAACGGGAAGCTGTTAGCCAGC
 ATCAATAGCACGGTGCGGCTCTATGAGTGGACAACAGAGAAGGAGCTGCGCACT
 GAGTGCAACCACTACAACAACATCATGGCCCTCTACCTGAAGACCAAGGGCGAC
 TTCATCCTGGTGGGCGACCTTATGCGCTCAGTGCTGCTGCTTGCTTACAAGCCCA
 30 TGGAAGGAACTTTGAAGAGATTGCTCGAGACTTTAATCCCAACTGGATGAGTG
 CTGTGGAAATCTTGATGATGACAATTTTCTGGGGGCTGAAAATGCCTTTAACTT
 GTTTGTGTGTCAAAAGGATAGCGCTGCCACCACTGACGAGGAGCGGCAGCACCT
 CCAGGAGGTTGGTCTTTTCCACCTGGGCGAGTTTGTCAATGTCTTTTGCCACGGCT
 CTCTGGTAATGCAGAATCTGGGTGAGACTTCCACCCCCACACAAGGCTCGGTGCT
 35 CTTCGGCACGGTCAACGGCATGATAGGGCTGGTGACCTCACTGTCAGAGAGCTG
 GTACAACCTCCTGCTGGACATGCAGAATCGACTCAATAAAGTCATCAAAAGTGT
 GGGGAAGATCGAGCACTCCTTCTGGAGATCCTTTCACACCGAGCGGAAGACAGA
 ACCAGCCACAGGTTTCATCGACGGTGACTTGATTGAGAGTTTCCTGGATATTAGC
 CGCCCCAAGATGCAGGAGGTGGTGGCAAACCTACAGTATGACGATGGCAGCGGT
 40 ATGAAGCGAGAGGCCACTGCAGACGACCTCATCAAGGTTGTGGAGGAGCTAACT
 CGGATCCATTAGCCAAGGGCAGGGGGCCCCCTTTGCTGACCCTCCCCAAAGGCTTT
 GCCCTGCTGCCCTCCCCCTCCTCTCCACCATCGTCTTCTTGGCCATGGGAGGCCTT
 TCCCTAAGCCAGCTGCCCCCAGAGCCACAGTTCCCCTATGTGGAAGTGGGGCGG
 GCTTCATAGAGACTTGGGAATGAGCTGAAGGTGAAACATTTTCTCCCTGGATTTT
 45 TACCAGTCTCACATGATTCCAGCCATCACCTTAGACCACCAAGCCTTGATTGGTG
 TTGCCAGTTGTCCTCCTTCCGGGGAAGGATTTTGCAGTTCTTTGGCTGAAAGGAA
 GCTGTGCGTGGTNTNTGTGTGTATGTNTGTGTGTATGTGTATCTCACACTCATG
 CATTGTCCTCTTTTATTTAGATTGGCAGTGTAGGGAGTTGTGGGTAGTGGGGAA
 GAGGGTTAGGAGGGTTTCATTGTCTGTGAAGTGAGACCTTCCTTTTACTTTTCTTC

TATTGCCTCTGAGAGCATCAGGCCTAGAGGCCTGACTGCCAAGCCATGGGTAGCC
TGGGTGTAAAACCTGGAGATGGTGGATGATCCCCACGCCACAGCCCTTTTGTCTC
TGCAAACCTGCCTTCTTCGGAAAGAAGAAGGTGGGAGGATGTGAATTGTTAGTTTC
TGAGTTTTACCAAATAAAGTAGAATATAAGAAGAAAGGTAAAAAAA

5

SEQ ID NO: 331

>2742 BLOOD 334388.1 D14660 g285944 Human mRNA for KIAA0104 gene, complete
cds. 0

ACGTGAGCTAGCTGGCATGGCGGCCTGCATTGCAGCGGGGCACTGGGCTGCAAT
10 GGGCCTAGGCCGGAGTTTCCAAGCCGCCAGGACTCTGCTCCCCCGCCGGCCTCT
ATCGCCTGCAGGGTCCACGCGGGGCCTGTCCGGCAGCAGAGCACTGGGCCTTCC
GAGCCCGGTGCGTTCCAACCGCCGCCGAAACCGGTCATCGTGGACAAGCACCGC
CCCGTGGAACCGGAACGCAGGTTCTTGAGTCCTGAATTCATTCCTCGAAGGGGAA
GAACAGATCCTCTGAAATTTCAAATAGAAAGAAAAGATATGTTAGAAAGGAGAA
15 AAGTACTCCACATTCCAGAGTTCTATGTTGGAAGTATTCTTCGTGTTACTACAGCT
GACCCATATGCCAGTGGAAAAATCAGCCAGTTTCTGGGGATTTGCATTCAGAGAT
CAGGAAGAGGACTTGGAGCTACTTTCATCCTTAGGAATGTTATCGAAGGACAAG
GTGTCGAGATTTGCTTTGAACTTTATAATCCTCGGGTCCAGGAGATTCAGGTGGT
CAAATTAGAGAAACGGCTGGATGATAGCTTGCTATACTTACGAGATGCCCTTCCT
20 GAATATAGCACTTTTGATGTGAATATGAAGCCAGTAGTACAAGAGCCTAACCAA
AAAGTTCCTGTTAATGAGCTGAAAGTAAAAATGAAGCCTAAGCCCTGGTCTAAA
CGCTGGGAACGTCCAAATTTTAATATTAAGGAATCAGATTTGATCTTTGTITAA
CTGAACAGCAAATGAAAGAAAGCTCAGAAGTGGAAATCAGCCATGGCTTGAATTTG
ATATGATGAGGGAATATGATACTTCAAAAATTGAAGCTGCAATATGGAAGGAAA
25 TTGAAGCGTCGAAAAGGTCTTGATTCTGAGAATGAATTTGGTTAGTTGCAGAAGA
TACATTGGCTCTAAGAGGATATATTTTGAGACCAATTTAATTTCAATTTATAAGAA
CATAGTAATTAAGTGAACCTAAGCATTCAATTGTTTTATTAATACTTTTTTTCTAAAA
TAAACTTTGTACACCAGTTTATTACTCTAAAAAGAGAATTACACATGCCAAATGG
ACCAATGTCCATTTGCTTATTGGAGGCAAAGCTACAATAGAAGTCAGAGCATCAC
30 CAGAATGGTCTTTAATGAGCATGGAACCTGAGCAAAGGGAATAGGTGGGATGAA
TTTTTTTTTTAATTGTGAAACAATTCATAAGCACAAATATGATTTACAGAATAATAA
ACATTCATGTACCCACTATCAGGTAAAGAAATAGAACATTTATTAATATGTAGGA
ATGTTAAGAAATAAAACATTTAATAAGATCTCAGAAGACTCCAGTAAATCTGCA
ATTGTATCTCTCTCCTTTTTTAAATGTAAATATCATCTTGACTTGTTAATTATCCCT
35 TGCATTTCTTTTAGTTTACTGCCAACACATATATTCTTCAACAATATATTTAATTTT
GAAAAACCTGAAAAAATAACCTGTTAGCAAGTATAAAGGGGCGAGTATTACTAT
TATTGCATGAAGGCTTCAAGGGAAACGTTACAGTCTTTGGGCCCTAGAGGGGCTT
CAGCTTCCTCTGAGAGTTTACAGGGGGCCAATTTTTGAGGCAAATTCATGGGCTA
AGGTTTATGGAGTGGAGTTCTTGCCAAAACAGGAAAGGGCTCACCAACAAGGGT
40 GATCTGGNGCAGGGGTTTATTACTGGGGGATACCTGGGATTGTTGCAAGAAATT
GGTGGGTTAGGAGGGGAAAGTAAAC

SEQ ID NO: 332

>2772 BLOOD 344645.4 AF026086 g2655140 Human peroxisome biogenesis disorder
protein 1 (PEX1) mRNA, complete cds. 0

45

CCGGGTCCCGGGTCCTTTGCGGCGCTAGGGTGGGCGAACCCAGAGCGACGCTCC
GGGACGATGTGGGGCAGCGATCGCCTGGCGGGTGCTGGGGGAGGCGGGGCGGC
AGTGACTGTGGCCTTCACCAACGCTCGCGACTGCTTCCTCCACCTGCCGCGGCGT
CTCGTGGCCCAGCTGCATCTGCTGCAGAATCAAGCTATAGAAGTGGTCTGGAGTC

ACCAGCCTGCATTCTTGAGCTGGGTGGAAGGCAGGCATTTTAGTGATCAAGGTGA
AAATGTGGCTGAAATTAACAGACAAGTTGGTCAAAAACCTTGGACTCTCAAATGG
GGGACAGGTATTTCTCAAGCCATGTTCCCATGTGGTATCTTGTCAACAAGTTGAG
GTGGAACCCCTCTCAGCAGATGATTGGGAGATACTGGAGCTGCATGCTGTTTCCC
5 TTGAACAACATCTTCTAGATCAAATTCGAATAGTTTTTCCAAAAGCCATTTTTCCT
GTTTGGGTGATCAACAAACGTACATATTTATCCAAATTGTTGCACTAATACCAG
CTGCCTCTTATGGAAGGCTGGAAACTGACACCAAACCTCCTTATTTCAGCCAAAGAC
ACGCCGAGCCAAAGAGAATACATTTTCAAAAAGCTGATGCTGAATATAAAAAACT
TCATAGTTATGGAAGAGACCAGAAAGGAATGATGAAAGAACTTCAAACCAAGCA
10 ACTTCAGTCAAATACTGTGGGAATCACTGAATCTAATGAAAACGAGTCAGAGAT
TCCAGTTGACTCATCATCAGTAGCAAGTTTATGGACTATGATAGGAAGCATTTTT
TCCTTTCAATCTGAGAAGAAACAAGAGACATCTTGGGGTTTAACTGAAATCAATG
CATTCAAAAATATGCAGTCAAAGGTTGTTCTCTAGACAATATTTTCAGAGTATG
CAAATCTCAACCTCCTAGTATATATAACGCGTCAGCAACCTCTGTTTTTCATAAA
15 CACTGTGCCATTTCATGTATTTCCATGGGACCAGGAATATTTTGATGTAGAGCCCA
GCTTTACTGTGACATATGGAAAGCTAGTTAAGCTACTTTCTCCAAAGCAACAGCA
AAGTAAAACAAAACAAAATGTGTTATCACCTGAAAAAGAGAAGCAGATGTCAGA
GCCACTAGATCAAAAAAAAAAATTAGGTCAGATCATAATGAAGAAGATGAGAAGGC
CTGTGTGCTACAAGTAGTCTGGAATGGACTTGAAGAATTGAACAATGCCATCAA
20 ATATACCAAAAATGTAGAAGTTCTCCATCTTGGGAAAGTCTGGATTCCAGATGAC
CTGAGGAAGAGACTAAATATAGAAATGCATGCCGTAGTCAGGATAACTCCAGTG
GAAGTTACCCCTAAAATTCCAAGATCTCTAAAGTTACAACCTAGAGAGAATTTAC
CTAAAGACATAAGTGAAGAAGACATAAAAACCTGTATTTTATTTCATGGGTACAGC
AGTCTACTACCACCATGCTTCCCTTTGGTAATATCAGAGGAAGAATTTATTAAGCT
25 GGAAACTAAAGATGGACTGAAGGAATTTTCTCTGAGTATAGTTCATTCTTGGGAA
AAAGAAAAAGATAAAAATATTTTTCTGTTGAGTCCCAATTTGCTGCAGAAGACTA
CAATACAAGTCCTTCTAGATCCTATGGTAAAAGAAGAAAACAGTGAGGAAATTG
ACTTTATTCTTCCCTTTTTTAAAGCTGAGCTCTTTGGGAGGAGTGAATTCCTTAGGC
GTATCCTCCTTGGAGCACATCACTCACAGCCTCCTGGGACGCCCTTTGTCTCGGC
30 AGCTGATGTCTCTTGTGTCAGGACTTAGGAATGGAGCTCTTTTACTCACAGGAGG
AAAGGGAAGTGGAAAATCACTTTAGCCAAAGCAATCTGTAAAGAAGCATTGTA
CAAACCTGGATGCCCATGTGGAGAGAGTTGACTGTAAAGCTTTACGAGGAAAAAG
GCTTGAAAACATACAAAAAACCTAGAGGTGGCTTTCTCAGAGGCAGTGTGGAT
GCAGCCATCTGTTGTCCTGCTGGATGACCTTGACCTCATTGCTGGACTGCCTGCTG
35 TCCCGGAACATGAGCACAGTCCTGATGCGGTGCAGAGCCAGCGGCTTGCTCATG
CTTTGAATGATATGATAAAAGAGTTTATCTCCATGGGAAGTTTGGTTGCACTGAT
TGCCACAAGTCAGTCTCAGCAATCTCTACATCCTTTACTTGTTTCTGCTCAAGGAG
TTCACATATTTTCAGTGCGTCCAACACATTTCAGCCTCCTAATCAGGAACAAAGATG
TGAAATTCTGTGTAATGTAATAAAAAATAAATTGGACTGTGATATAACAAGTTC
40 ACCGATCTTGACCTGCAGCATGTAGCTAAAGAACTGGAGGGTTTGTGGCTAGA
GATTTTACAGTACTTGTGGATCGAGCCATACATTCTCGACTCTCTCGTCAGAGTAT
ATCCACCAGAGAAAAATTAGTTTTAACAACATTGGACTTCCAAAAGGCTCTCCGC
GGATTTCTTCCCTGCGTCTTTGCGAAGTGTCAACCTGCATAAACCTAGAGACCTGG
GTTGGGACAAGATTGGTGGGTACATGAAGTTAGGCAGATACTCATGGATACTAT
45 CCAGTTACCTGCCAAGTATCCAGAATTATTTGCAAACCTTGCCCATACGACAAAGA
ACAGGAATACTGTTGTATGGTCCGCCTGGAACAGGAAAAACCTTACTAGCTGGG
GTAATTGCACGAGAGAGTAGAATGAATTTTATAAGTGTCAAGGGGCCAGAGTTA
CTCAGCAAATACATTGGAGCAAGTGAACAAGCTGTTTCGGGATATTTTATTAGAG
CACAGGCTGCAAAGCCCTGCATTCTTTTCTTTGATGAATTTGAATCCATTGCTCCT

CGGCGGGGTCATGATAATACAGGAGTTACAGACCGAGTAGTTAACCAGTTGCTG
 ACTCAGTTGGATGGAGTAGAAGGCTTACAGGGTGTATTATGTATTGGCTGCTACTA
 GTCGCCCTGACTTGATTGACCTGCCCTGCTTAGGCCTGGTCGACTAGATAAATG
 TGTATACTGTCCTCCTCCTGATCAGGTGTCACGTCTTGAAATTTTAAATGTCCTCA
 5 GTGACTCTCTACCTCTGGCAGATGATGTTGACCTTCAGCATGTAGCATCAGTAAC
 TGA CTCTTTACTGGAGCTGATCTGAAAGCTTTACTTTACAATGCCCAATTGGAG
 GCCTTACATGGAATGCTGCTCTCGAGTGGACTCCAGGATGGAAGTTCCAGCTCTG
 ATAGTGACCTAAGTCTGTCTTCAATGGTCTTTCTTAACCATAGCAGTGGCTCTGAC
 GATTCAGCTGGAGATGGAGAATGTGGCTTAGATCAGTCCCTTGTTTCTTTAGAGA
 10 TGTCCGAGATCCTTCCAGATGAATCAAAATTCAATATGTACCGGCTCTACTTTGG
 AAGCTCTTATGAATCAGAACTTGGAATGGAACCTCTTCTGATTTGAAGCTCACA
 TTGTCTCTCTGCACCAAGCTCCATGACTCAGGATTTGCCTGGAGTTCCTGGGAAA
 GACCAGTTGTTTTTACAGCCTCCAGTGTTAAGGACAGCTTCACAAGAGGGTTGCC
 AAGAACTTACACAAGAACAAGAGATCAACTGAGGGCAGATATCAGTATTATCA
 15 AAGGCAGATACCGGAGCCAAAGTGGAGAGGACGAATCCATGAACCAACCAGGA
 CCAATCAAAACCAGACTGGCTATTAGTCAGTCACATTTAATGACTGCACTTGGTC
 ACACAAGACCATCCATTAGTGAAGATGACTGGAAGAATTTTGCTGAGCTATATG
 AAAGCTTTCAAAATCCAAAGAGGAGAAAAAATCAAAGTGAACAATGTTTCGAC
 CTGGACAGAAAGTAACTTTAGCATAAAATATACTTCTTTTTGATTTGGTTCTGTTA
 20 AGTTTTTTGATGGCTTTTCCATATGTTGTAACAGGAAAAAATGGTGTCTATGAA
 TTTCTTCTTAATTTAACAATTTGGTTAATTTATAAAATCACAGATTGGTAAATGC
 TATAATTATGTAATGATCAGGATTGAGATTAATACTGTAGTATAAATTGGGACAT
 TATAACAGATTCCATATTTTATTTCTTAAATCTAAATTCAGTCTTTAATGAAATA
 ATATTAGCCAAATGGTGGAACTAATTTATTTCTTTTGAGGAAAAGATAATAAGA
 25 ATGTAATTAATTTAAATTTCTTGGAATTTCCAGTTGTATATTCATCACCTTTGTA
 GCATTTGACAAATTTTATGCTTAGCAGCTTCTTCACTGTTTTGAAATAAAATATCC
 TATTACCTACTG

SEQ ID NO: 333

30 >2812 BLOOD 1091854.1 X53416 g28242 Human mRNA for actin-binding protein
 (filamin) (ABP-280). 0

GCGCCTGGCGCGGGCGCGGGCGCGGAAGGCGATCCGGGCGCCACCCCGCGGTCAT
 CGGTCACCGGTCGCTCTCAGGAACAGCAGCGCAACCTCTGCTCCCTGCCTCGCCT
 CCCGCGCGCCTAGGTGCCTGCGACTTTAATTAAAGGGCCGTCCCCTCGCCGAGGC
 35 TGCAGCACCGCCCCCGGCTTCTCGCGCCTCAAAATGAGTAGCTCCCACTCTCG
 GGCGGGCCAGAGCGCAGCAGGGCGCGGCTCCGGGCGGCGGCGTTCGACACGCGG
 GACGCCGAGATGCCGGCCACCGAGAAGGACCTGGCGGAGGACGCGCCGTGGAA
 GAAGATCCAGCAGAACACTTTACGCGCTGGTGCAACGAGCACCTGAAGTGCCT
 GAGCAAGCGCATCGCCAACCTGCAGACGGACCTGAGCGACGGGCTGCGGCTTAT
 40 CGCGCTGTTGGAGGTGCTCAGCCAGAAGAAGATGCACCGCAAGCACAAACCAGCG
 GCCACTTTCCGCCAAATGCAGCTTGAGAACGTGTCGGTGGCGCTCGAGTTCCTG
 GACCGCGAGAGCATCAAATGGTGTCCATCGACAGCAAGGCCATCGTGGACGGG
 AACCTGAAGCTGATCCTGGGCCTCATCTGGACCCTGATCCTGCACTACTCCATCT
 CCATGCCCATGTGNNNNNNNNNNNNNNNNNNNNNNNCCAAGAAGCAGACCCCC
 45 AAGCAGAGGCTCCTGGGCTGGATCCAGAACAAGCTGCCGCAGCTGCCCATCACC
 AACTTCAGCCGGGACTGGCAGAGCGGCCGGGCCCTGGGCGCCCTGGTGGACAGC
 TGTGCCCCGGGCTGTGTCCTGACTGGGACTCTTGGGACGCCAGCAAGCCCGTTA
 CCAATGCGCGAGAGGCCATGCAGCAGGCGGATGACTGGCTGGGCATCCCCCAGG
 TGATCACCCCCGAGGAGATTGTGGACCCCAACGTGGACGAGCACTCTGTCATGA

CCTACCTGTCCCAGTTCCCCAAGGCCAAGCTGAAGCCAGGGGCTCCCTTGCGCCC
CAAACCTGAACCCGAAGAAAGCCCGTGCCTACGGGCCAGGCATCGAGCCCACAGG
CAACATGGTGAAGAAGCGGGCAGAGTTCACTGTGGAGACCAGAAGTGCTGGCCA
GGGAGAGGTGCTGGTGTACGTGGAGGACCCGGCCGGACACCAGGAGGAGGCAA
5 AAGTGACCGCCAATAACGACAAGAACCGCACCTTCTCCGTCTGGTACGTCCCCGA
GGTGACGGGGACTCATAAGGTTACTGTGCTCTTTGCTGGCCAGCACATCGCCAAG
AGCCCCCTTCGAGGTGTACGTGGATAAGTCACAGGGTGACGCCAGCAAAGTGACA
GCCCAAGGTCCCGGCCTGGAGCCCAGTGGCAACATCGCCAACAAGACCACCTAC
TTTGAGATCTTTACGGCAGGAGCTGGCACGGGCGAGGTTCGAGGTTGTGATCCAG
10 GACCCCATGGGACAGAAGGGCACGGTAGAGCCTCAGCTGGAGGGCCCGGGGCGA
CAGCACATACCGCTGCAGCTACCAGCCCACCATGGAGGGCGTCCACACCGTGCA
CGTCACGTTTGCCGGCGTGCCCATCCCTCGCAGCCCCCTACACTGTCACTGTTGGC
CAAGCCTGTAACCCGAGTGCCTGCCGGGCGGTTGGCCGGGGCCTCCAGCCCAAG
GGTGTGCGGGTGAAGGAGACAGCTGACTTCAAGGTGTACACAAAGGGCGCTGGC
15 AGTGGGGAGCTGAAGGTCACCGTGAAGGGCCCCAAGGGAGAGGAGCGCGTGAA
GCAGAAGGACCTGGGGGATGGCGTGTATGGCTTCGAGTATTACCCCATGGTCCCT
GGAACCTATATCGTCACCATCACGTGGGGTGGTCAGAACATCGGGGCGAGTCCCT
TCGAAGTGAAGGTGGGCACCGAGTGTGGCAATCAGAAGGTACGGGCGCTGGGGCC
CTGGGCTGGAGGGCGGCGTCGTTGGCAAGTCAGCAGACTTTGTGGTGGAGGCTA
20 TCGGGGACGACGTGGGCACGCTGGGCTTCTCGGTGGAAGGGCCATCGCAGGCTA
AGATCGAATGTGACGACAAGGGCGACGGCTCCTGTGATGTGCGCTACTGGCCGC
AGGAGGCTGGCGAGTATGCCGTTACGTGCTGTGCAACAGCGAAGACATCCGCC
TCAGCCCCCTTCATGGCTGACATCGGTGACGCGCCCCAGGACTTCCACCGACAG
GGTGAAGGCACGTGGGCGCTGGATTGGAGAAGACAGGTGTGGCCGTCAACAAGCC
25 AGCAGAGTTCACAGTGGATGCCAAGCACGGTGGCAAGGCCCACTTCGGGTCCA
AGTCCAGGACAATGAAGGCTGCCCTGTGGAGGCGTTGGTCAAGGACAACGGCAA
TGGCACTTACAGCTGCTCCTACGTGCCAGGAAGCCGGTGAAGCACACAGCCAT
GGTGTCTTGGGGAGGCGTCAGCATCCCCAACAGCCCCTTCAGGGTGAATGTGGG
AGCTGGCAGCCACCCCAACAAGGTCAAAGTATACGGCCCCGGAGTAGCCAAGAC
30 AGGGCTCAAGGCCACAGAGCCCACCTACTTCACTGTGGACTGCGCCGAGGCTGG
CCAGGGGGACGTGAGCATCGGCATCAAGTGTGCCCCTGGAGTGGTAGGCCCCGC
CGAAGCTGACATCGACTTCGACATCATCCGCAATGACAATGACACCTTCACGGTC
AAGTACACGCCCCGGGGGGCTGGCAGCTACACCATTATGGTCCTCTTTGCTGACC
AGGCCACGCCCACCAGCCCCATCCGAGTCAAGGTGGAGCCCTCTCATGACGCCA
35 TAAGGTGAAGGCCGAGGGCCCTGGCCTCAGTCGCACTGGTGTGAGCTTGGCAA
GCCACCCACTTCACAGTAAATGCCAAAGCTGCTGGCAAAGGCAAGCTGGACGT
CCAGTTCTCAGGACTACCAAGGGGGATGCAGTGCAGATGTGGACATCATCGA
CCACCATGACAACACCTACACAGTCAAGTACACGCCTGTCCAGCAGGGTCCAGT
AGGCGTCAATGTCACTTATGGAGGGGATCCCATCCCTAAGAGCCCTTTCTCAGTG
40 GCAGTATCTCAAGCCTGGACCTCAGCAAGATCAAGGTGTCTGGCCTGGGAGAG
AAGGTGGACGTTGGCAAAGACCAGGAGTTCACAGTCAAATCAAAGGGTGCTGGT
GGTCAAGGCAAAGTGGCATCCAAGATTGTGGGGCCCCCTCGGGTGCAGCGGTGCCC
TGCAAGGTGGAGCCAGGCCTGGGGGCTGACAACAGTGTGGTGCCTTCTGCCC
CGTGAGGAAGGGCCCTATGAGGTGGAGGTGACCTATGACGGCGTGCCGTGCCTG
45 GCAGCCCTTTCTCTGGAAGCTGTGGCCCCCACCAGCCTAGCAAGGTGAAGGCGT
TTGGGCCGGGGCTGCAGGGAGGCAGTGCGGGCTCCCCCGCCCGCTTCACCATCG
ACACCAAGGGCGCCGGCACAGGTGGCCTGGGCCTGACGGTGGAGGGCCCCCTGTG
AGGCGCAGCTCGAGTGCTTGGACAATGGGGATGGCACATGTTCCGTGTCTACGT
GCCACCCGAGCCCCGGGGACTACAACATCAACATCCTCTTCGCTGACACCCACATC

CCTGGCTCCCCATTCAAGGCCACGTGGTTCCTGCTTTGACGCATCCAAAGTCA
AGTGCTCAGGCCCCGGGCTGGAGCGGGCCACCGCTGGGGAGGTGGGCCAATTCC
AAGTGGACTGCTCGAGCGCGGGCAGCGCGGAGCTGACCATTGAGATCTGCTCGG
AGGCGGGGCTTCCGGCCGAGGTGTACATCCAGGACCACGGTGATGGCACGCACA
5 CCATTACCTACATTCCCCTCTGCCCCGGGGCCTACACCGTCACCATCAAGTACGG
CGGCCAGCCCGTGCCCAACTTCCCCAGCAAGCTGCAGGTGGAACCTGCGGTGGA
CACTTCCGGTGTCCAGTGCTATGGGCCTGGTATTGAGGGCCAGGGTGTCTTCCGT
GAGGCCACCACTGAGTTCAGTGTGGACGCCCCGGGCTCTGACACAGACCGGAGGG
CCGCACGTCAAGGCCCGTGTGGCCAACCCCTCAGGCAACCTGACGGAGACCTAC
10 GTTCAGGACCGTGGCGATGGCATGTACAAAGTGGAGTACACGCCTTACGAGGAG
GGACTGCACTCCGTGGACGTGACCTATGACGGCAGTCCCGTGCCCAGCAGCCCCT
TCCAGGTGCCCGTGACCGAGGGCTGCGACCCCTCCCGGGTGCGTGTCCACGGGCC
AGGCATCCAAAGTGGCACCACCAACAAGCCCAACAAGTTCACTGTGGAGACCAG
GGGAGCTGGCACGGGGCGGCCTGGGCCTGGCTGTAGAGGGCCCCCTCCGAGGCCA
15 AGATGTCCTGCATGGATAACAAGGACGGCAGCTGCTCGGTTCGAGTACATCCCTTA
TGAGGCTGGCACCTACAGCCTCAACGTACCTATGGTGGCCATCAAGTGCCAGGC
AGTCCTTTCAAGGTCCCTGTGCATGATGTGACAGATGCGTCCAAGGTCAAGTGCT
CTGGGGCCCCGGCCTGAGCCCAGGCATGGTTCGTGCCAACCTCCCTCAGTCCTTCC
AGGTGGACACAAGCAAGGCTGGTGTGGCCCCATTGCAGGTCAAAGTGCAAGGGC
20 CCAAAGGCCTGGTGGAGCCAGTGGACGTGGTAGACAACGCTGATGGCACCCAGA
CCGTCAATTATGTGCCCAGCCGAGAAGGGCCCTACAGCATCTCAGTACTGTATGG
AGATGAAGAGGTAGCCCCGAGCCCCCTTCAAGGTCAAGGTGCTGCCCTACTCATGA
TGCCAGCAAGGTGAAGGCCAGTGGCCCCGGGCTCAACACCACTGGCGTGCCTGC
CAGCCTGCCCGTGGAGTTCACCATCGATGCAAAGGACGCCCCGGGGAGGGCCTGCT
25 GGCTGTCCAGATCACGGATCCCGAAGGCAAGCCGAAGAAGACACACATCCAAGA
CAACCATGACGGCACGTATACAGTGGCCTACGTGCCAGACGTGACAGGTTCGCTA
CACCATCCTCATCAAGTACGGTGGTGACGAGATCCCCTTCTCCCCGTACCGCGTG
CGTGCCGTGCCACCGGGGACGCCAGCAAGTGCAGTGTACAGTGTCAATCGGA
GGTCACGGGCTAGGTGCTGGCATCGGCCCCACCATTGAGATTGGGGAGGAGACG
30 GTGATCACTGTGGACACTAAGGCGGCAGGCAAAGGCAAAGTGACGTGCACCGTG
TGCACGCCTGATGGCTCAGAGGTGGATGTGGACGTGGTGGAGAATGAGGACGGC
ACTTTCGACATCTTCTACACGGCCCCCAGCCGGGCAAATACGTATCTGTGTGC
GCTTTGGTGGCGAGCACGTGCCCAACAGCCCCCTTCCAAGTGACGGCTCTGGCTGG
GGACCAGCCCTCGGTGCAGCCCCCTTACGGTCTCAGCAGCTGGCCCCACAGTAC
35 ACCTACGCCCAGGGCGGCCAGCAGACTTGGGCCCCGGAGAGGGCCCCCTGGTGGGT
GTCAATGGGCTGGATGTGACCAGCCTGAGGCCCTTTGACCTTGTATCCCCCTTCA
CCATCAAGAAGGGCGAGATCACAGGGGAGGTTCCGGATGCCCTCAGGCAAGGTGG
CGCAGCCCACCATCACTGACAACAAAGACGGCACCGTGACCGTGCGGTATGCAC
CCAGCGAGGCTGGCCTGCACGAGATGGACATCCGCTATGACAACATGCACATCC
40 CAGGAAGCCCCTTGCACTTCTATGTGGATTACGTCAACTGTGGCCATGTCACTGC
CTATGGGCCTGGCCTCACCCATGGAGTAGTGAACAAGCCTGCCACCTTCACCGTC
AACACCAAGGATGCAGGAGAGGGGGGCTGTCTCTGGCCATTGAGGGCCCCGTCC
AAAGCAGAAATCAGCTGCACTGACAACCAGGATGGGACATGCAGCGTGTCTTAC
CTGCCTGTGCTGCCGGGGGACTACAGCATTCTAGTCAAGTACAATGAACAGCAC
45 GTCCAGGCAGCCCCCTTCACTGCTCGGGTCACAGGTGACGACTCCATGCGTATGT
CCCACCTAAAGGTTCGGCTCTGCTGCCGACATCCCCATCAACATCTCAGAGACGGA
TCTCAGCCTGCTGACGGCCACTGTGGTCCCGCCCTCGGGCCGGGAGGAGCCCTGT
TTGCTGAAGCGGCTGCGTAATGGCCACGTGGGGATTTCATTTCGTGCCCAAGGAGA
CGGGGGAGCACCTGGTGCATGTGAAGAAAATGGCCAGCACGTGGCCAGCAGCC

CCATCCCGGTGGTGATCAGCCAGTCGGAAATTGGGGATGCCAGTCGTGTTCCGGGT
 CTCTGGTCAGGGCCTTCACGAAGGCCACACCTTTGAGCCTGCAGAGTTTATCATT
 GATACCCGCGATGCAGGCTATGGTGGGCTCAGCCTGTCCATTGAGGGCCCCAGC
 AAGGTGGACATCAACACAGAGGACCTGGAGGACGGGACGTGCAGGGTCACCTAC
 5 TGCCCCACAGAGCCAGGCAACTACATCATCAACATCAAGTTTGCCGACCAGCAC
 GTGCCTGGCAGCCCCTTCTCTGTGAAGGTGACAGGCGAGGGCCGGGTGAAAGAG
 AGCATCACCCGCAGGCGTCGGGCTCCTTCAGTGGCCAACGTTGGTAGTCATTGTG
 ACCTCAGCCTGAAAATCCCTGAAATTAGCATCCAGGATATGACAGCCCAGGTGA
 CCAGCCCATCGGGCAAGACCCATGAGGCCGAGATCGTGGAAGGGGAGAACCAC
 10 ACCTACTGCATCCGCTTTGTTCCCGCTGAGATGGGCACACACACAGTCAGCGTGA
 AGTACAAGGGCCAGCACGTGCCTGGGAGCCCCTTCCAGTTCACCGTGGGGCCCCCT
 AGGGGAAGGGGGAGCCCAAGGTCCGAGCTGGGGGCCCTGGCCTGGAGAGAG
 CTGAAGCTGGAGTGCCAGCCGAATTCAGTATCTGGACCCGGGAAGCTGGTGCTG
 GAGGCCTGGCCATTGCTGTGCGAGGGCCCCAGCAAGGCTGAGATCTCTTTTGAGGA
 15 CCGCAAGGACGGCTCCTGTGGTGTGGCTTATGTGGTCCAGGAGCCAGGTGACTAC
 GAAGTCTCAGTCAAGTTCAACGAGGAACACATTCCCGACAGCCCCCTTCGTGGTGC
 CTGTGGCTTCTCCGTCTGGCGACGCCCCGCCGCTCACTGTTTCTAGCCTTCAGGAG
 TCAGGGCTAAAGGTCAACCAGCCAGCCTCTTTTGAGTCAGCCTGAACGGGGGCC
 AAGGGGGCGATCGATGCCAAGGTGCACAGCCCCCTCAGGAGCCCTGGAGGAGTGC
 20 TATGTCACAGAAATTGACCAAGATAAGTATGCTGTGCGCTTCATCCCTCGGGAGA
 ATGGCGTTTACCTGATTGACGTCAAGTTCAACGGCACCCACATCCCTGGAAGCCC
 CTTCAAGATCCGAGTTGGGGAGCCTGGGCGATGGAGGGGAGCCAGGCTTGGTGTC
 TGGCTTACGGAGCAGGTCTGGAAGGCGGTGTACAGGGGAGCCAGCTGAGTTTCGT
 CGTGAACACGAGCAATGCGGGAGCTGGTGCCCTGTGCGGTGACCATTGACGGCGC
 25 CTCCAAGGTGAAGATGGATTGCCAGGAGTGCCCTGAGGGGCTACCGCGTCACCTA
 TACCCCCATGGCACCTGGCAGCTACCTCATCTCCATCAAGTACGGCGGCCCTAC
 CACATTGGGGGCGAGCCCCTTCAAGGCCAAAGTCACAGGCCCCCGTCTCGTCAGC
 AACCAAGCCTCCACGAGACATCATCAGTGTGTTGTAGACTCTCTGACCAAGGCCA
 CCTGTGCCCCCAGCATGGGGCCCCGGGTCTGGGCCTGCTGACGCCAGCAAGGT
 30 GGTGGCCAAGGGCCTGGGGCTGAGCAAGGCCTACGTAGGCCAGAAGAGCAGCTT
 CACAGTAGACTGCAGCAAAGCAGGCAACAACATGCTGCTGGTGGGGGTTTCATGG
 CCAAGGACCCCCTGCGAGGAGATCCTGGTGAAGCACGTGGGCAGCCGGCTCTA
 CAGCGTGTCTACCTGCTCAAGGACAAGGGGGAGTACACACTGGTGGTCAAATG
 GGGGACGAGCACATCCAGGCAGCCCCTACCGCGTTGTGGTGGCCTGAGTCTG
 35 GGGCCCGTGCCAGCCGGCAGCCCCAAGCCTGCCCCGCTACCCAAGCAGCCCCG
 CCCTCTTCCCCTCAACCCCGGCCAGGCCGCCCTGGCCGCCCGCCTGTCACTGCA
 GCCGCCCTGCCCTGTGCCGTGCTGCGCTCACCTGCCTCCCCAGCCAGCCGCTGA
 CCTCTCGGCTTTCACTTGGGCAGAGGGAGCCATTTGGTGGCGCTGCTTGTCTTCTT
 TGGTTCTGGGAGGGGTGAGGGATGGGGGTCTGTACACAACCACCCACTAGTTCT
 40 CTTCTCCAGCCAAGAGGAATAAAGTTTTGCTTCCATTCTCAAAA

SEQ ID NO: 334

>2827 BLOOD 006880.13 U87278 g4099426 Human splicing factor SRp30c gene, exon 2. 0

GGGCGACGGGCGCATCTACGTGGGGAACCTTCCGACCGACGTGCGCGAGAAGGA
 45 CTTGGAGGACCTGTTCTACAAGTACGGCCGCATCCGCGAGATCGAGCTCAAGAA
 CAGGCACGGCCTCGTGCCCTTCGCCTTCGTGCGCTTCGAGGACCCCCGAGATGCA
 GAGGATGCTATTTATGGAAGAAATGGTTATGATTATGGCCAGTGTCGGCTTCGTG
 TGGAGTTCCCCAGGACTTATGGAGGTGCGGGTGGGTGGCCCCGTGGTGGGAGGA
 ATGGGCCTCTACAAGAAGATCTGATTTCCGAGTTCTTGTTCAGGTATGTTCTT

TCAAACAGAATGAGATGATACATGTAAAATACTTAACACAGACTCTGTGTTCCAA
 GAAATGATAGCTGTTATTCTTCAGTGCATGGGACACGGGGGCTTTCTTTTCAATA
 GCCTGTGTGAAGCCTTGCCCTGGATTGCCAATGAGGAAAGTATCCTGCAAATGAA
 ATTGCGCTGGGAGTGCAGCCTTGGAAGAACATAACCATATTTCTTGTAAGGAGT
 5 TTTCTAGTGGTGAGAAGGAAAGATGATGGGAAAACCTTGAGCTACAATTCTAAAG
 ATGCTTCTTTTGAATATACTTGGCATCAGACATGGTAGAAAGGCATTCAAGGAG
 CCAGATTTGAACAACCTTACCCAGCCTTGGATCCTGAAGAAGATCAGATTTTGTGG
 TGGTTTTAGAATTAAATATTTTTTAAAACCCCGTAACTTAAGAGTCTTAGAGATTT
 TATTGGAAAGTATAGACTATTTCTGTCTAGTGTTTATAAGTGATGAAATGCTAAA
 10 CTGGGAGGTTTATCTATCTTCAAAATATTAACACACTGGAAAGACCTGGGGCCTT
 CTGCATATTGCATGGGAGTTTTAGGGCCCTGGTGGAATGAAATAAATCGAGGAG
 CCTGGCACCTTTTTAAGATGTGAATGTCACACAATCACAGCATACTCCCATGTGC
 TTAAGAGTGATACTCTCAGTATCTGCCTATCTTGTGTCCCTTTGTAATTTTTTAAC
 CCCAGAACTCTATCCCTCCTTCAGGATGTCATACATTATCTTTTTTCTCTCCATG
 15 CTGCTCTGAAATCCTGCTTAGAAAACCTATTAGGAAATGGCTGCAGTCCTGAGCTG
 TGAGCGGTAAACACAGCCTTTGAGAGCAGGAGCACATTTCCCTTTCATGACATCA
 GGTAGGGTTGTATGACTCCCGACTAGTTTTAGCATCTGAGTCTTACCTTCCCCCCC
 ACTGTATTGAAGAATGTTGGTGATCTTTTAAGAGGTACTCTGTATAGTTTGTTCATT
 CATACTACAAGAAAACAACTTTAGATTTTTTGTGTTGTGTTGTACCTTCAGC
 20 TACTCTTTGGTTATTTTCATGTCTGGTTTCAAAATTCCCATGTCCTGTGAAACCCTG
 TCAAGCAATAAATAATTGGTACTGTTAAATTTTATAATGGAAAAAATTGGAACCTC
 AAAGTATTAGGAGTTTGGCATTGATTTTAAAGGACAAAGAAAGAGGCTATGAAT
 TCTCAAAGATACTAAACCTGTAAATGGGATGGAGTCTTCTGCTCTGTTGAAAAGGCC
 TGGTCTCTGGAAGATGAACTTAAAACCAGCTTCTCAAAGTGGTTTCATTTACCACA
 25 CATACTTCAGTGCTCTTTTCTGATTTTCATGTCCCTTATCAAGGTTTATGATTTGGG
 GACCCTCAGGATTTAAGTGATCATGGAGAAAGGACCATAGGTATTGCTGGCTCTT
 AACAGGGCAGTTAACATAGCTGAAGGATGTGGGCTTTCTTATGTTCTCCATGCCT
 AGGACTTCCTCCGTCAGGCAGCTGGCAGGACCTGAAGGATCACATGCGAGAAGC
 TGGGGATGTCTGTTATGCTGATGTGCAGAAGGATGGAGTGGGGATGGTTCGAGTA
 30 TCTCAGAAAAGAAGACATGGAATATGCCCTGCGTAAACTGGATGACACCAAATT
 CCGCTCTCATGAGGGTGAACTTCCTACATCCGAGTTTATCCTGAGAGAAGCACC
 AGCTATGGCTACTCACGGTCTCGGTCTGGGTCAAGGGGCCGTGACTCTCCATACC
 AAAGCAGGGGTTCCCCACACTACTTCTCTCCTTTCAGGCCCTACTGAGACAGGTG
 ATGGGAATTTTTTCTTTATTTTTTAGGTAACTGAGCTGCTTTGTGCTCAGAACT
 35 ACATTCCAGATTGAGGATTTAGTGTCTTAGGAAATTTTTTTAATTTTTTTTTTTA
 AAGNAGAAAAAACTACATAATTTCTACCAGGGCCATATTAGCAGTGAAACATT
 TTAAACTGCAGAAATTGTGGTTTGGGTTTCAGAAACAAGTTGTATATTTTTTACCC
 CTGATTATGGGAAAAAAATCAGTTCTGTCTTGGTGGGTTGCTCTACTATGGAGAT
 CAACAGTTACTGTGACTGAGTCGGCCCATCTGTTTAGAAATATATTTTAAATGTT
 40 TAGTGTTTCCTCGCTTTCCAAGTTACATTTTATCTTGAGCAGATTTAAAACGAGAT
 TAGCTGTAATAGGACTCCAGGATGTGGGCAGATGTCTACTTGTCAAAGGGAGAA
 TCCAAATACAAC

SEQ ID NO: 335

45 >2846 BLOOD 407165.16 AF048693 g3170416 Human transcription factor forkhead-like 7
 (FKHL7) gene, complete cds. 0
 GGCTACCCGGGCCAGCAGCAGAACTTCCACTCGGTGCGGGAGATGTTTCGAGTCA
 CAGAGGATCGGCTTGAACAACCTCCAGTGAACGGGAATAGTAGCTGTCAAATG
 GCCTTCCCTTCCAGCCAGTCTCTGTACCGCACGTCCGGAGCTTTCGTCTACGACTG

TAGCAAGTTTTGACACACCCTCAAAGCCGAACTAAATCGAACCCCAAAGCAGGA
 AAAGCTAAAGGAACCCATCAAGGCCAAAATCGAACTAAAAAAAAAAAAATCCAA
 TTAACCAAAACCCCTGAGAATATTCACCACACCAGCGAACAGAATATCCCTCCA
 AAAATTTCAGCTCACCAGCACCAGCACGAAGAAAACCTCTATTTTCTTAACCGATTA
 5 ATTCAGAGCCACCTCCACTTTGCCTTGTCTAAATAAACAACCCGTAAACTGTTT
 TATACAGAGACAGCAAAATCTTGGTTTATTAAAGGACAGTGTTACTCCAGATAAC
 ACGTAAGTTTCTTCTTGCTTTTCAGAGACCTGCTTTCCCCTCCTCCCGTCTCCCCTC
 TCTTGCCTTCTTCCTTGCCTCTCACCTGTAAGATATTATTTTATCCTATGTTGAAGG
 GAGGGGGAAAGTCCCCGTTTATGAAAGTCGCTTTCTTTTTATTTCATGGACTTGTTT
 10 TAAAATGTAAATTGCAACATAGTAATTTATTTTAAATTTGTAGTTGGATGTCGTGG
 ACCAAACGCCAGAAAGTGTTCCTTCCAAAACCTGACGTTAAATTGCCTGAAACTTTAA
 ATTGTGCTTTTTTTCTCATTATAAAAAGGGAAACTGTATTAATCTTATTCTATCCT
 CTTTTCTTTCTTTTTGTTGAACATATTCATTGTTTGTTTATTAATAAATTACCATT
 AGTTTGAATGAGACCTATATGTCTGGATACTTTAATAGAGCTTTAATTATTACGA
 15 AAAAAGATTTTCAGAGATAAAACACTAGAAAGTTACCTATTCTCCACCTAAATCTCT
 GAAAAATGGAGAAACCCCTCTGACTAGTCCATGTCAAATTTTACTAAAAGTCTTTT
 TGTTTAGATTTATTTTCTGTCAGCATCTTCTGCAAAATGTACTATATAGTCAGCTT
 GCTTTGAGGCTAGTAAAAAGATATTTTCTAAACAGATTGGAGTTGGCATATAAA
 CAAATACGTTTTCTCACTAATGACAGTCCATGATTCGGAAATTTTAAGCCCATGA
 20 ATCAGCCGCGGTCTTACCACGGTGATGCCTGTGTGCCGAGAGATGGGACTGTGCG
 GCCAGATATGCACAGATAAATATTTGGCTTGTGTATTCCATATAAAATTGCAGTG
 CATATTATACATCCCTGTGAGCCAGATGCTGAATAGATATTTTCTTATTATTTCAG
 TGCTTTATAAAAGGAAAAATAAACCAGTTTAAATGTATGTATATAATTCTCCC
 CCATTTACAATCCTTCATGTATTACATAGAAGGATTGCTTTTTTAAAAATATACTG
 25 CGGGTTGGAAAGGGATATTTAATCTTTGAGAAACTATTTTAGAAAATATGTTTGT
 AGAACAATTATTTTTGAAAAAGATTTAAAGCAATAACAAGAAGGAAGGCGAGAG
 GAGCAGAACATTTTGGTCTAGGGTGGTTTCTTTTTAAACCATTTTTTCTTGTTAAT
 TTACAGTTAAACCTAGGGGACAATCCGGATTGGCCCTCCCCCTTTGTAAATAAC
 CCAGGAAATGTAATAAATTCATTATCTTAGGGTGATCTGCCCTGCCAATCAGACT
 30 TTGGGGAGATGGCGATTTGATTACAGACGTTTCGGGGGGGTGGGGGGCTTGCACT
 TTGTTTTGGAGATAATACAGTTTCTGCTATCTGCCGCTCCTATCTAGAGGCAACA
 CTTAAGCAGTAATTGCTGTTGCTTGTGTCAAAATTTGATCATTGTTAAAGGATTG
 CTGCAAATAAATACACTTTAATTTTCAGTCCAAAAAANAAAAAAGGGC

35 SEQ ID NO: 336

>2898 BLOOD 257782.19 D49738 g736703 Human cytoskeleton associated protein (CG22)
mRNA, complete cds. 0

TTTTTTCTGGGTTTCTAGTGAATTTAATGCATGAGTCTCAAAAATCAATGGCAAA
 GGAAAAAATGAATAAAATTAATAATGGGGTCAGGAGAAAAGGGCCATGGGCACA
 40 CACAGGAGGGGCAGTCAGTGGCTGAGCTAGGAGCTGAAGCAGGGGAATTCCTTA
 GGTGTCATATCTCGTCCAACCCGTAGTCCTCCTCCGGGAAGTCCCCACCGTCAC
 GACTGCTGGCTTGACAAAGGCGCCATACTTGGCCTGGCATTCTGAAGTAGCGTTTC
 CCATTCACACTGCCATCATTTTTCCCCAGTGGCTCATCATAGCGGACACCAATCC
 AGTAGCCAGGCTTGAAATCTGTGAGACCTACATACATGACGGTGCCCCGGCGAG
 45 GGGATTGTCCCGCCGCCGCACCTCACAGCGGCTGCCACGGGGATGGAGCTGG
 CCTGGGCCTTCTCCTCGGCCAGGCGCTGGGCGGCCTCGGCCTCCTGCTGAGCCCG
 CTCCTCCTCGTTGTACCGGCCGAGCTTGCTGCGCTTCAGGAAAGAGCGGACCGTG
 TCTTGCCTCTGGTCGTAGGCTTCTTGTGAGATCGTGTACTTCTCCACCCGGGACAC
 GTCCTCATACTACCAAGGCGGGCGCCACTGTGGTCAATGACGTGGATGCGGCA

GCCGTCATCTACAGGGTAGGAGCCCAGGAGCGCATCCTCTTGATCCAGCTTGCTG
TAGAACTTGTCTCAACTCCATACAGCTCCAGTTCCATGCAGGAAGCAGGGGCTGC
CCACCAGCAACTCCAGTTTACACTTGAAGTACGCGATGGTGAGGGCTGCGGGCTGTA
TCGCTTCTCGGAGCGGAAGGTGTTGAGGGAGCTGCTGATGAAAACGGTCACCGT
5 GGGTGCCGACACCCCCGTCACCTCCATCTTGCCGCGCCCTGCGGATGCCTGCAGC
GCAGGTCCAGCCGCCTCACACCCGCTCCGCAGCCGCCGCC

SEQ ID NO: 337

>2901 BLOOD GB_AA504617 gi|2240777|gb|AA504617|AA504617 aa63b04.s1

10 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:825583 3' similar to TR:G642094
G642094 AUTOANTIGEN P542 ;, mRNA sequence [Homo sapiens]
GCTGGGATGCGTTGGGGGAGGAGGCGCCTGCTGCCAGCTTTCCTCTGGTACCCGC
TGTGGGGGTGGCATCCAGGGTTGGGTGCCCCGGCTTGACAGGTACGTTAGTTTTGA
CACGCCGGACCAAAGGGACTGTGACCCGGGGTCGCTTCACAGGGACCGCCCTGG
15 GCACTGGCACGGGCGACAGACGGCCCCGGTAGTCGAAGAGCCTGTCGTAGA

>2912 BLOOD 1162375.1 U09202 g852427 Human ornithine decarboxylase antizyme (Oaz)
mRNA, complete cds. 0

GTGCTGAGTGGCGGCACTCTACATCGAGATCCCGGGCGGCGGCTGCCCCGAGGGG
AGCAAGGACAGCTTTGCAGTTCTCCTGGAGTTCGCTGAGGAGCAGCTGCGAGCC
20 GACCATGTCTTCATTTGCTTCCACAAGAACCGCGATGACAGAGCCGCCTTGCTCC
GAACCTTCAGCTTTTTGGGCTTTGAGATTGTGAGACCGGGGCATCCCCTTGTCCT
CAAGAGACCCGACGCTTGCTTCATGGCCTACACGTTTCGAGAG

SEQ ID NO: 338

25 >2917 BLOOD 358853.44 Z19554 g37851 Human vimentin gene. 0

GAGGGCGCCCCACCCACCCGCCCCACCCTCCCCGCTTCTCGCTAGGTCCCGATT
GGCTGGCGCGCTCCGCGGCTGGGATGGCAGTGGGAGGGGACCCTCTTTCCTAAC
GGGGTTATAAAACAGCGCCCTCGGCGGGGTCCAGTCCTCTGCCACTCTCGCTCC
GAGGTCCCCGCGCCAGAGACGCAGCCGCGCTCCCACCACCCACACCCACCGCGC
30 CCTGCGTTTCGCTCTTCTCCGGGAGCCAGTCCCGCGCCACCGCCGCGCCAGGC
CATCGCCACCCTCCGCAGCCATGTTCCACCAGGTCCGTGTCCTCGTCTCTACCG
CAGGATGTTTCGGCGGCCCGGGCACCGCGAGCCGGCCGAGCTCCAGCCGGAGCTA
CGTGACTACGTCCACCCGCACCTACAGCCTGGGCAGCGCGCTGCGCCCCAGCACC
AGCCGCAGCCTCTACGCCTCGTCCCCGGGCGGCGTGTATGCCACGCGCTCCTCTG
35 CCGTGCGCCTGCGGAGCAGCGTGCCCGGGGTGCGGCTCCTGCAGGACTCGGTGG
ACTTCTCGCTGGCCGACGCCATCAACACCGAGTTCAAGAACACCCGCACCAACG
AGAAGGTGGAGCTGCAGGAGCTGAATGACCGCTTCGCCAACTACATCGACAAGG
TGCGCTTCTTGAGCAGCAGAATAAGATCCTGCTGGCCGAGCTCGAGCAGCTCA
AGGGCCAAGGCAAGTCGCGCCTGGGGGACCTCTACGAGGAGGAGATGCGGGAG
40 CTGCGCCGGCAGGTGGACCAGCTAACCAACGACAAAGCCCGCGTCGAGGTGGAG
CGCGACAACCTGGCCGAGGACATCATGCGCCTCCGGGAGAAATTGCAGGAGGAG
ATGCTTCAGAGAGAGGAAGCCGAAAACACCCTGCAATCTTTCAGACAGGATGTT
GACAATGCGTCTCTGGCACGTCTTGACCTTGAACGCAAAGTGGAATCTTTGCAAG
AAGAGATTGCCTTTTTGAAGAACTCCACGAAGAGGAAATCCAGGAGCTGCAGG
45 CTCAGATTCAAGAACAGCATGTCCAAATCGATGTGGATGTTTCCAAGCCTGACCT
CACGGCTGCCCTGCGTGACGTACGTACGCAATATGAAAGTGTGGCTGCCAAGAA
CCTGCAGGAGGCAGAAGAATGGTACAAATCCAAGTTTGCTGACCTCTCTGAGGC
TGCCAACCGGAACAATGACGCCCTGCGCCAGGCAAAGCAGGAGTCCACTGAGTA
CCGGAGACAGGTGCAGTCCCTCACCTGTGAAGTGGATGCCCTTAAAGGAACCAA

TGAGTCCCTGGAACGCCAGATGCGTGAAATGGAAGAGAACTTTGCCGTTGAAGC
 TGCTAACTACCAAGACACTATTGGCCGCCTGCAGGATGAGATTGAGAATATGAA
 GGAGGAAATGGCTCGTCACCTTCGTGAATACCAAGACCTGCTCAATGTAAAGATG
 GCCCTTGACATTGAGATTGCCACCTACAGGAAGCTGCTGGAAGGCGAGGAGAGC
 5 AGGATTTCTCTGCCTCTTCCAAACTTTTCTCCTGAACTGAGGGAACTAATCT
 GGATTCACCTCCCTCTGGTTGATACCCACTCAAAAAGGACACTTCTGATTAAGACG
 GTTGAACTAGAGATGGACAGGTTATCAACGAACTTCTCAGCATCACGATGAC
 CTTGAATAAAAATTGCACACACTCAGTGCAGCAATATATTACCAGCAAGAATAA
 AAAAGAAATCCATATCTTAAAGAAACAGCTTTCAAGTGCCTTTCTGCAGTTTTTC
 10 AGGAGCGCAAGATAGATTTGGAATAGGAATAAGCTCTAGTTCTTAACAACCGAC
 ACTCCTACAAGATTTAGAAAAAAGTTTACAACATAATCTAGTTTACAGAAAAATC
 TTGTGCTAGAATACTTTTTTAAAAGGTATTTTGAATACTATTAAACTGCTTTTTTT
 TTTCCAGCAAGTATCCAACCAACTTGGTTCTGCTTCAATAAATCTTTGGAAAAAC
 AAAGCAGTTTTTAATAGTATTCAAAAATACCTTTTAAAAAGTATTCTAGCACAAAGAT
 15 TTTTCTGTAACTAGATTATGTTGTAAACTTTTTTCTAAATCTTGTAGGAGTGTGCG
 GTTGTTAAGAACTAGAGCTTATTCCTATTCCAAATCTATCTTGCGCTCCTGAAAA
 ACTGCAGAAAGGCACTTGAAAGCTGTTTCTTTAAGATATGGATTTCTTTTTTACCT
 TGCTGGTAATATATTGCTGCACTGAGTGTGTGCAATTTTTTATTCAAGGTCATCGTG
 ATGCTGAGAAGTTTCGTTGATAACCTGTCCATCTCTAGTTTCAACCGTCTTAATCA
 20 GAAGTGTCTTTTTTGAGTGGGTATCAACCAGAGGGAGTGAATCCAGATTAGTTTC
 CCTCAGGTTTCAGGGAGGAAAAGTTTGGAAGAGGCAGAGAAATCCTGCTCTCCTC
 GCCTTCCAGCTGCTAACTACCAAGACACTATTGGCCGCCTGCAGGATGAGATTCA
 GAATATGAAGGAGGAAATGGCTCGTCACCTTCGTGAATACCAAGACCTGCTCAA
 TGTTAAGATGGCCCTTGACATTGAGATTGCCACCTACAGGAAGCTGCTGGAAGGC
 25 GAGGAGAGCAGGATTTCTCTGCCTCTTCCAAACTTTTCTCCTGAACTGAGGG
 AACTAATCTGGGATTCACCTCCCCTCTGGTTGATACCCACTCAAAAAGGACACTT
 CTGATTAAGACGGTTGAACTAGAGATGGACAGGTTATCAACGAACTTCTCAG
 CATCACGATGACCTTGAATAAAAATTGCACACACTCAGTGCAGCAATATATTACC
 AGCAAGAATAAAAAAGAAATTCATATCTTAAAGAAACAGCTTTCAAGTGCCTTT
 30 CTGCAGTTTTTTCAGGAGCGCAAGATAGATTTGGAATAGGAATAAGCTCTAGTTCT
 TAACAACCGACACTCCTACAAGATTTAGAAAAAAGTTTACAACATAATCTAGTTT
 ACAGAAAAATCTTGTGCTAGAATACTTTTTTAAAAGGTATTTTGAATACCATTAAA
 ACTGCTTTTTTTTTTCCAGCAAGTATCCAACCAACTTGTCTGCTTCAATAAATC
 TTTGGAAAACTCAAAA
 35

SEQ ID NO: 339

>2925 BLOOD 235943.40 J05581 g188869 Human polymorphic epithelial mucin (PEM)

mRNA, complete cds. 0

CGCTCCACCTCTCAAGCAGCCAGCGCCTGCCTGAATCTGTTCTGCCCCCTCCCCA
 40 CCCATTTCAACCACCACCATGACACCGGGCACCCAGTCTCCTTTCTTCTGCTGCTG
 CTCCTCACAGTGCTTACAGTTGTTACAGGTTCTGGTCATGCAAGCTCTACCCAG
 GTGGAGAAAAGGAGACTTCGGCTACCCAGAGAAGTTCAGTGCCAGCTCTACTG
 AGAAGAATGCTGTGAGTATGACCAGCAGCGTACTCTCCAGCCACAGCCCCGGTT
 CAGGCTCCTCCACCACTCAGGGACAGGATGTCACTCTGGCCCCGGCCACGGAAC
 45 CAGCTTCAGGTTTCAGCTGCCACCTGGGGACAGGATGTACCTCGGTCCAGTAC
 CAGGCCAGCCCTGGGCTCCACCACCCCGCCAGCCACGATGTACCTCAGCCCCG
 GACAACAAGCCAGCCCCGGGCTCCACCGCCCCCCCAGCCACGGTGTACCTCG
 GCCCCGGACACCAGGCCGGCCCCGGGCTCCACCGCCCCCCCAGCCATGGTGTG
 ACCTCGGCCCCGGACAACAGGCCCGCCTTGGGCTCCACCGCCCCCTCCAGTCCACA

ATGTCACCTCGGCCTCAGGCTCTGCATCAGGCTCAGCTTCTACTCTGGTGCACAA
CGGCACCTCTGCCAGGGCTACCACAACCCAGCCAGCAAGAGCACTCCATTCTCA
ATTCCCAGCCACCACTCTGATACTCCTACCACCCTTGCCAGCCATAGCACCAAGA
CTGATGCCAGTAGCACTCACCATAGCACGGTACCTCCTCTCACCTCCTCCAATCA
5 CAGCACTTCTCCCCAGTTGTCTACTGGGGTCTCTTTCTTTTTCTGTCTTTTCACAT
TTCAAACCTCCAGTTTAATTCCTCTCTGGAAGATCCCAGCACCGACTACTACCAA
GAGCTGCAGAGAGACATTTCTGAAATGTTTTTGAGATTTATAAACAAGGGGGTT
TTCTGGGCCTCTCCAATATTAAGTTCAGGCCAGGATCTGTGGTGGTACAATTGAC
TCTGGCCTTCCGAGAAGGTACCATCAATGTCCACGACGTGGAGACACAGTTCAAT
10 CAGTATAAAACGGAAGCAGCCTCTCGATATAACCTGACGATCTCAGACGTCAGC
GTGAGTGATGTGCCATTTCTTTCTCTGCCAGTCTGGGGCTGGGGTGCCAGGCT
GGGGCATCGCGCTGCTGGTGGTCTGTGTTCTGGTTGCGCTGGCCATTGTCTAT
CTCATTGCCTTGGCTGTCTGTGTCAGTGCCGCCGAAAGAACTACGGGCAGCTGGACA
TCTTTCCAGCCCGGGATACCTACCATCCTATGAGCGAGTACCCACCTACCACAC
15 CCATGGGCGCTATGTGCCCCCTAGCAGTACCGATCGTAGCCCTATGAGAAGGTT
TCTGCAGGTAATGGTGGCAGCAGCCTCTCTTACACAAACCCAGCAGTGGCAGCC
ACTTCTGCCAACTTGTAGGGGACGTCGCCCGCTGAGCTGAGTGGCCAGCCAGTG
CCATTCCACTCCACTCAGGTTCTTCAGGGCCAGAGCCCCTGCACCCTGTTTGGGC
TGGTGAGCTGGGAGTTCAGGTGGGCTGCTCACAGCCTCCTTCAGAGGCCCCACCA
20 ATTTCTCGGACACTTCTCAGTGTGTGGAAGCTCATGTGGGCCCCTGAGGGCTCAT
GCCTGGGAAGTGTGTTGGTGGGGGCTCCCAGGAGGACTGGCCCAGAGAGCCCTG
AGATAGCGGGGATCCTGAACTGGACTGAATAAAACGTGGTCTCCCCTGCGCCA
AAAAAATTAAAAA
25 SEQ ID NO: 340
>2948 BLOOD 331753.1 AB002311 g2224566 Human mRNA for KIAA0313 gene,
complete cds. 0
GTCCTACGTAGATAACAGCTTCCGCCAGGCGGTGATGAAGAATCCCCCGAAAG
GACCCCCCAGGATCTGGAAATAGTATATTCCTATTTACATGGTATGGAAGCCTTA
30 TCAAACCTTGAGGGAGCATCAACTTAGGTTAATGTGTGAAACTGTGAGATATGAG
AGACACGAAGCAAATGAAGTTTTATACTACCCTGATGATATTGGGACCTGCTGGT
ATATCCTTCTTTCTGGTTCCGTGTTTCATCAAGGAATCCATGTTTCTTCCAAGAAGC
AGTTTTGGCAAGCGTTCTGCAGGAAGTTTTAGGCGTGGCTGTGAATGCATTGTTT
TAGAGCCTTCTGAAATGATTGTGGTGGACTATATGGATGAAAATGAAGAATATTT
35 TCAGCGGCAAGCTTCCCATAGACAGTCTCGAAGGAGATTTAGAAAAATCAACCA
GAAAGGTGAAAGACAAACAATTATTGACACTGTGGATCCTTATCCCATGGGCAA
ACCTCCTTTGCCTAGAGGCTATCACACGGAATGCACTAAATCTCAGCTTCCTGCA
GATTTCAAAAACCTGCATCTTACTGACAGTCTCCACCCACAGGTGACCCACGTTT
CTTCTAGCCATTCAGGATGTAGTATCACTAGTGATTCTGGGAGCAGCAGTCTTTC
40 TGATATCTACCAGGCCACAGAAAGCGAGGCTGGTGATATGGACCTGAGTGGGTT
GCCAGAAACAGCAGTGGATTCCGAAGACGACGACGATGAAGAAGACATTGAGA
GAGCATCAGATCCTCTGATGAGCAGGGACATTGTGAGAGACTGCCTAGAGAAGG
ACCAATTGACCGGACAGATGATGACATTGAACAACTCTTGGAATTTATGCACCA
GTTGCCTGCTTTTGCCAATATGACAATGTCAGTGAGGCGAGAACTCTGTGCTGTG
45 ATGGTGTTTCGCAGTGGTGGAAAGAGCAGGGACCATAGTGTTAAATGATGGTGAA
GAGCTGGACTCCTGGTCAGTGATTCTCAATGGATCTGTGGAAGTGACTTATCCAG
ATGGAAAAGCAGAAATACTGTGCATGGGAAATAGTTTTGGTGTCTCTCCTACCAT
GGACAAAGAATACATGAAAGGAGTGATGAGAACAAAGGTGGATGACTGCCAGT
TTGTCTGCATAGCCCAGCAAGATTACTGCCGTATTCTCAATCAAGTAGAAAAGAA

CATGCAAAAAGTTGAAGAGGAAGGAGAGATTGTTATGGTGAAAGAACACCGAG
AACTTGATCGAACTGGAACAAGAAAGGGACACATTGTCATCAAGGGTACCTCAG
AAAGGTTAACAATGCATTTGGTGGAAGAGCATTGAGTAGTAGATCCAACATTCAT
AGAAGACTTTCTGTTGACCTATAGGACTTTTCTTTCTAGCCCAATGGAAGTGGGC
5 AAAAAAGTTATTGGAGTGGTTTAATGACCCGAGCCTCAGGGATAAGGTTACACGG
GTAGTATTATTGTGGGTAAATAATCACTTCAATGACTTTGAAGGAGATCCTGCAA
TGACTCGATTTTTAGAAAGATTTGAAAACAATCTGGAAAGAGAGAAAATGGGTG
GACACCTAAGGCTGTTGAATATCGCGTGTGCTGCTAAAGCAAAAAGAAGATTGA
TGACGTTAACAAAACCATCCCGAGAAGCTCCTTTGCCTTTTATCTTACTTGAGG
10 CTCTGAGAAGGGATTTGGAATCTTTGTTGACAGTGTAGATTCAGGTAGCAAAGCA
ACTGAAGCAGGCTTGAAACGGGGGGGATCAGATATTAGAAGTAAATGGCCAAAAC
TTTGAAAACATTCAGCTGTCAAAGCTATGGAAATTCTTAGAAATAACACACATT
TATCTATCACTGTGAAAACCAATTTATTTGTATTTAAAGAACTTCTAACAAGATT
GTCAGAAGAGAAAAGAAATGGTGCCCCCACCTTCCTAAAATTGGTGACATTAA
15 AAAGGCCAGTCGCTACTCCATTCCAGATCTTGCTGTAGATGTAGAACAGGTGATA
GGACTTGAAAAAGTGAACAAAAAAGTAAAGCCAACACTGTGGGAGGAAGGAA
CAAGCTGAAAAAGATACTCGACAAGACTCGGATCAGTATCTTGCCACAGAAACC
ATACAATGATATTGGGATTGGTCAGTCTCAAGATGACAGCATAGTAGGATTAAG
GCAGACAAAGCACATCCCAACTGCATTGCCTGTCAGTGGAACCTTATCATCCAGT
20 AATCCTGATTTATTGCAGTCACATCATCGCATTTTAGACTTCAGTGCTACTCCTGA
CTTGCCAGATCAAGTGCTAAGGGTTTTTAAGGCTGATCAGCAAAGCCGCTACATC
ATGATCAGTAAGGACACTACAGCAAAGGAAGTGGTCATTGAGGCTATCAGGGAG
TTTGCTGTTACTGCCACCCCGGATCAATATTTACTATGTGAGGTCTCTGTACACCC
TGAGGGAGTAATCAAACAAAGAAGACTTCCAGATCAGCTTTCCAAACTTGCAGA
25 CAGAATACAACCTGAGTGGAAGGTATTATCTGAAAAACAACATGGAAACAGAAAC
TCTTTGTTTCAAGATGAAGATGCTCAGGAGTTGTTGAGAGAGAGTCAAATTTCCCTC
CTTCAGCTCAGCACTGTGGAAGTTGCAACACAGCTCTCTATGCGAAATTTTGAAC
TCTTTCGCAACATTGAACCTACTGAATATATAGATGATTTATTTAAACTCAGATC
AAAAACCAGCTGTGCCAACCTGAAGAGATTTGAAGAAGTCATTAACCAGGAAAC
30 ATTTTGGGTAGCATCTGAAATTCTCAGAGAAACAAACCAGCTGAAGAGGATGAA
GATCATTAAGCATTTTCATCAAGATAGCACTGCACTGTAGGGAATGCAAGAATTTT
AACTCAATGTTTGCAATCATCAGTGGCCTAAACCTGGCACCAGTGGCAAGACTGC
GAACGACCTGGGAGAACTTCCCAATAAATACGAAAAACTATTTCAAGATCTCC
AAGACCTGTTTGATCCTTCCAGAAACATGGCAAAATATCGTAATGTTCTCAATAG
35 TCAAAATCTACAACCTCCCATAATCCCTCTATTCCCAGTTATCAAAAAGGATCTC
ACCTTCCTTCACGAAGGAAATGACTCAAAAGTAGACGGGCTGGTCAATTTTGAG
AAGCTAAGGATGATTGCAAAAGAAATTCGTCACGTTGGCCGAATGGCTTCAGTG
AACATGGACCCTGCCCTCATGTTTCAGGACTCGGAAGAAGAAATGGCGGAGTTTG
GGGTCTCTCAGCCAGGGTAGTACAAATGCAACAGTGCTAGATGTTGCTCAGACA
40 GGTGGTCATAAAAAGCGGGTACGTCGTAGTTCCTTTCTCAATGCCAAAAGCTTT
ATGAAGATGCCCAAATGGCTCGAAAAGTGAAGCAGTACCTTTCCAATTTGGAGC
TAGAAATGGACGAGGAGAGTCTTCAGACATTATCTCTGCAGTGTGAGCCAGCAA
CCAACACATTGCCTAAGAATCCTGGTGACAAAAGCCTGTCAAATCCGAGACCT
CTCCAGTAGCTCCAAGGGCAGGGTCACAACAGAAAGCTCAGTCCCTGCCACAGC
45 CCCAGCAGCAGCCACCACCAGCACATAAAATCAACCAGGGACTACAGGTTCCCG
CCGTGTCCCTTTATCCTTCACGGAAGAAAGTGCCCGTAAAGGATCTCCACCTTT
TGGCATAAACTCTCCACAAGCTTTAAAAAAAATTCTTTCTTTGTCTGAAGAAGGA
AGTTTGGAACGTCACAAGAAACAGGCTGAAGATACAATATCAAATGCATCTTCG
CAGCTTCTCTCCTCCTACTTCTCCACAGAGTTCTCCAAGGAAAGGCTATACTTT

GGCTCCCAGTGGTACTGTGGATAATTTTTCAGATTCTGGTCACAGTGAAATTTCTT
CACGATCCAGTATTGTTAGCAATTCGTCTTTTGAAGTCAAGTGGCAGTCTCACTGCAC
GATGAGAGGGCGCCAGAGGCATTCTGTGAGCATCGTGGAACAAACCTAGGGATG
GGCAGGATGGAGAGGGCGGACCATGATTGAACCTGATCAGTATAGCTTGGGGTCC
5 TATGCACCAATGTCCGAGGGGCCGAGGCTTATATGCTACAGCTACAGTAATTTCTT
CTCCAAGCACAGAGGAACCTTTCCCAGGATCAGGGGGATCGCGCGTCACTTGATG
CTGCTGACAGTGGCCGTGGGAGCTGGACGTCATGCTCAAGTGGCTCCCATGATAA
TATACAGACGATCCAGCACCAGAGAAGCTGGGAGACTCTTCCATTTCGGGCATAC
TCACTTTGATTATTCAGGGGATCCTGCAGGTTTATGGGCATCAAGCAGCCATATG
10 GACCAAATTATGTTTTCTGATCATAGCACAAAGTATAAACAGGCAAAATCAAAGT
AGAGAGAGCCTTGAACAAGCCCAGTCCCGAGCAAGCTGGGCGTCTTCCACAGGT
TACTGGGGAGAAGACTCAGAAGGTGACACAGGCACAATAAAGCGGAGGGGTGG
AAAGGATGTTTCCATTGAAGCCGAAAGCAGTAGCCTAACGTCTGTGACTACGGA
AGAAACCAAGCCTGTCCCCATGCCTGCCACATAGCTGTGGCATCAAGTACTACA
15 AAGGGGCTCATTGCACGAAAGGAGGGCAGGTATCGAGAGCCCCCGCCACCCCT
CCCGGCTACATTGGAATTTCCATTACTGACTTTCCAGAAGGGCACTCCCATCCAG
CCAGGAAACCGCCGGACTACAACGTGGCCCTTCAGAGATCGCGGATGGTTCGCAC
GATCCTCCGACACAGCTGGGCCTTCATCCGTACAGCAGCCACATGGGCATCCCAC
CAGCAGCAGGCCTGTGAACAAACCTGCAGTGGCATAAACCGAACGAGTCTGACC
20 CGCGCCTCGCCCCCTATCAGTCCCAAGGGTTTTCCACCGAGGAGGATGAAGATGA
ACAAGTTTCTGCTGTTTGAGGCACAGACTTTTCTGGAAGCAGAGCGAGCCACCTG
AAAGGAGAGCACAAGAAGAGCGTCCTGAGCATTGGAGCCTTGGAACCTCATTCT
GAGGACGGTGGACCAGTTTGCTCCTTCCTTCCTTAAAGCAGCATGGGGCTTC
TTCTCCCTTCTTCTTTCCCTTTGCATGTGAAATACTGTGAAGAAATTGCCCTG
25 GCACTTTTCAGACTTTGTTGCTTGAAATGCACAGTGCAGCAATCTTCGAGCTCCC
ACTGTTGCTGCCTGCCACATCACACAGTATCATTCCAAATTCCAAGATCATCACA
ACAAGATGATTCACTCTGGCTGCACTTCTCAATGCCTGGAAGGATTTTTTTTAATC
TTCCTTTTAGATTTCAATCCAGTCCTAGCACTTGATCTCATTGGGATAATGAGAAA
AGCTAGCCATTGAACTACTTGGGGCCTTTAACCCACCAAGGAAGACAAAGAAAA
30 ACAATGAAATCCTTTGAGTACAGTGCTTGTCACCTTGTTTACAATGTCCTCCTTTT
AAAAAAAAAAATGAGTTTAAAGATTTTGTTCAGAGAGTAAATATATATCCATTTA
ATGATTACAGTATTATTTTAAACCTTAAGTAGGGTTGCCAGCCTGGTTTCTGAAA
AACCAAATATGCCGGACAGGGTGTGGCCACACCAAGAAGACGGGAAGACCTGG
CTTGTGACCCTGGCTTCCCATGTCCTTCTGGTCTCACCCGCGAAGTGCCCTATCCT
35 GGAAGTATGAAATGTTAGCCAATTAATACCAAGACACCTCATCTGCTCCTTCCCC
AGTGGATGGGGTTCTTCTGTAAACTGTTTGCACATGGCCAGGGGAGGGAACTA
GGACCCTTGTGTCCTGTCTGAGCCTTATGGAGGCAGGACGGTGTGATTGGCGGAT
GTGTCCTGCTCCATTGAGATGGATGGCAAACCCCATTTTTTAAGTTATATTTCTTTG
ATTTTTGTAAATTTAGAGGTGTAGGTTTTGTTTTTTGTTTTTTTGTTTTTTTTAAAG
40 AGAAACATTTATAACTGGATAGCATTGCAGTGAAAGCAGCTTGGGATGTTGGAG
CTAATGCCAGCTGTTTATACTGCTCTTTCAAGACAGCCTCCCTTTATTGAATTGGC
ATTAGGGAATAAACAAGCCTTTAAACGTGATAAAAGATCAAAAACCTGGTTAGA
CATGCCAGCCTTTGCAAGGCAGGTTAGTCACCAAAGACTAACCTCCAAGTGGCTT
TATGGACGCTGCATATAGAGAAGGCCTAAGTGTAGCAACCATCTGCTCACAGCT
45 GCTATTAACCCTATAATGACTGAAATGACCCCTCCACTCTATTTTTGTGTTGTTTT
GCACAGACTCCGGAAAAGTGAAGGCTGCCAATCTGAGTAGTACTCAAATGTGAG
GAACTGCTGGTCTTGGATTTTTTTTCCATTAAATTGAGCTGATCATATTGATCAGT
AGATAAACGTAAATAGCTTCAAATTTTAAAGTGAATTGCAGTGTTTTTTCCT
GTATCAAACAATGTCAGTGCTTTATTTAATAATTCTCTTCTGTATCATGGCATTG

TCTACTTGCTTATTACATTGTCAATTATGCATTTGTAATTTTACATGTAATATGCA
 TTATTTGCCAGTTTTATTATATAGGCTATGGACCTCATGTGCATATAGAAAGACA
 GAAATCTAGCTCTACCACAAGTTGCACAAATGTTATCTAAGCATTAAAGTAATTGT
 AGAACATAGGACTGCTAATCTCAGTTCGCTCTGTGATGTCAAGTGCAGAATGTAC
 5 AATTAAGTGGTGATTTCCTCATACTTTTGATACTACTTGTACCTGTATGTCTTTTA
 GAAAGACATTGGTGGAGTCTGTATCCCTTTTGTATTTTAAATAACAATAATTGTACA
 TATTGGTTATATTTTGTGGAAGATGGTAGAAATGTACTATGTTTATGCTTCTACA
 TCCAGTTTGTACAAGCTGGAAAATAAATAAATATAACATAAAGCCTTGCCTAT

10 SEQ ID NO: 341

>2957 BLOOD 425165.31 AF005898 g2209237 Human Na,K-ATPase beta-3 subunit
 pseudogene, complete sequence. 0

CTCGAGTACTCCCCGTAACGAGGAGGTGTTCTCGGCCGTCCCACCCTTCACTGCC
 GTCTCCGGGCTGCGCCGCCGGAGCCGGGACGCGCCTCCGCAGCCCTCGCCGGCTC
 15 CATCCCCGCGGCCGCAGCTCCTCTCGCCGTCCGCGCGCACACCATGACGAAGAAC
 GAGAAGAAGTCCCTCAACCAGAGCCTGGCCGAGTGGAAGCTCTTCATCTACAAC
 CCGACCACCGGAGAATTCCTGGGGCGCACCGCCAAGAGCTGGGGTTTGATCTTG
 CTCTTCTACCTAGTTTTTTATGGGTTCTGGCTGCACCTCTTCTCATTACGATGTG
 GGTATGCTTCAGACTCTCAACGATGAGGTTCCAAAATACCGTGACCAGATTCTT
 20 AGCCCAGGACTCATGGTTTTTCCAAAACCAAGTGACCGCATTGGAATATACATTCA
 GTAGGTCTGATCCAACCTTCGTATGCAGGGTACATTGAAGACCTTAAGAAGTTTCT
 AAAAACCATATAGTTTAGAAGAACAGAAGAACCCTCACAGTCTGTCTGATGGAGC
 ACTTTTTGAACAGAAGGGTCCAGTTTATGTTGCATGTCAGTTTCCTATTTTCATTAC
 TTCAAGCATGCAGTGGTATGAATGATCCTGATTTTGGCTATTCTCAAGGAAACCC
 25 TTGTATTCTTGTGAAAATGAACAGAATAATTGGATTAAAGCCTGAAGGAGTGCCA
 AGGATAGATTGTGTTTTCAAAGAATGAAGATATACCAAATGTAGCAGTTTATCCTC
 ATAATGGAATGATAGACTTAAAATATTTCCCATATTATGGGAAAAAACTGCATGT
 TGGGTATCTACAGCCATTGGTTGCTGTTCAAGGTCAGCTTTGCTCCTAACAACACT
 GGGAAAGAAGTAACAGTTGAGTGCAAGATTGATGGATCAGCCAACCTAAAAAGT
 30 CAGGATGATCGTGACAAGTTTTTGGGACGAGTTATGTTCAAAATCACAGCACGTG
 CATAGTATGAGTAGGATATCTCCACAGAGTAAATGTTGTGTTGTCTGTCTTCATT
 TGTAACAGCTGGACCTTCCATTCTAGAATTATGAGACCACCTTGGAGAAAGGTGT
 GTGGTACATGACATTGGGTTACATCATAACGTGCTTCCAGATCATAGTGTTTCAGT
 GTCCTCTGAAGTAACTGCCTGTTGCCTCTGCTGCCCTTTGAACCAAGTGACAGTCG
 35 CCAGATAGGGACCGGTGAACACCTGATTCCAAACATGTAGGATGGGGGTCTTGT
 CCTCTTTTATGTGGTTTAATTGCCAAGTGTCTAAAGCTTAATATGCCGTGCTATG
 TAAATATTTTATGGATATAACAACCTGTCATATTTTGATGTCAACAGAGTTTTAGG
 GATAAAATGGTACCCGGCCAACATCAAGTGACTTTATAGCTGCAAGAAATGTGG
 TATGTGGAGAAGTTCTGTATGTGAGCTTCCGTTATCTACCTGGCCCCCTGTAGGAA
 40 TTCCAGTTTGAGACCCCTACTGCATACGAACCTCTGGGAATCCTACAAATTCTAC
 AGGCAGCTGTGGACTGGGAATCTCAGAACCAAA

SEQ ID NO: 342

>2959 BLOOD 977665.8 U76421 g2039299 Human dsRNA adenosine deaminase

45 DRADA2b (DRADA2b) mRNA, complete cds. 0

GAGCCCTGGGCGGGGCGGCTGTTGGGGGGAATGGGTTTCGGGGTGCCCTGGGCAG
 GGGGCTACTGGGGGGCGGCTGTGAGGAGGAGTTGGGTTTCAGGGAGCCCTGGGCG
 GGGTGGCTGTCAGGGGGAACCTGGGTTCCGGGAGCCCTGGGCCGGGGCAGGGGGC
 GGCTGTAGGAAGGAACCTGGTTTCGGGGAGCCCTGGGCGGGGCGGCTGTGGGGAG

GAAGGTGACGTGCAGGGGACCAGAGGCTCTGCACTGCTCCTAGGACAGCTCATC
TGTAATCAGAAAAAATAAACAAAATACAGAACGCTGACTCCTCCGTGAGACA
GATCGGGGACCTTAGCACTTTAATCCCTCCCTTCTGAGCGCTCGGTGTGCACTTTT
AGACTATAGCTGTTTCATTGACGTGTCACTCTCCATCCAGTGTCTTGATGTGGCT
5 TTTAGAGACTTAGCAGAAAATTCGACACAAGCAGGAAGTATTTTTTAAGAAA
AAATATTACATTTTGAGGACATTTTGACAAGTAGGGGAAGAGAGGGGCTTCTGTTG
TTTTGTTTTGTTTTGTTTTGTTAACTAAACCTGAAGTATTAATTCCACAAAGACAC
TGTCCTCAGGACCACTCAGGTACAGCTCTGCCAGGGACAGAGTCTGCTAGTGG
GAGGTCTCAGGTGGGGCGGTGTGTTCTGTGCCATGAGGCAGCGACAGGTCCAGA
10 TGGATGTCGTCACCACCTTCCTCAGCTCTCATCACCTGGTCGTACGCCAGGCCCA
CCTCTTCCCAGCAAGGGACGCCAAAGAACTGCAGTTTTTATTCTGAGTCTTAATT
TAACTTTTCATCATCTTTTCTATTTTGGAGAATTTTTTGTAAATTAAGCAATTA
TTTTAAATGTGCAAGCCAGTATCTCACAAGGCATGGATTTCTGTGGAATTTATT
TTTATTCAAATAACCATATTTATCTCCAGGCTGTGGAATCGCCACTTTCTTTGTGA
15 AGACAGTGTCTCTCCTTGTAATCTCACACAGGTACACTGAGGAGGGGACGGCTCC
GTCTTCACATTGTGCACAGATCTGAGGATGGGATTAGCGAAGCTGTGGAGACTGC
ACATCCGGACCTGCCCATGTCTCAAAACAAACACATGTACAGTGGCTCTTTTTCC
TTCTCAAACACTTTACCCCAGAAGCAGGTGGTCTGCCCCAGGCATAAAGAAGGA
AAATTGGCCATCTTTCCACCTCTAAATTCTGTAAAATTATAGACTTGCTCAAAA
20 GATTCCTTTTGATCATCCCCACGCTGTGTAAAGTGGAAGGGCATTGTGTTCCGTG
TGTGTCCAGTTTACAGCGTCTCTGCCCCCTAGCGTGTTTTGTGACAATCTCCCTGG
GTGAGGAGTGGGTGCACCCAGCCCCGAGGCCAGTGGTTGCTCGGGGCCCTTCGGT
GTGAGTTCTAGTGTTCACCTTGATGCCGGGGAATAGAATTAGAGAAAACCTTGACC
TGCGGGGTTCAGGGACTGGTGGAGGTGGATGGCAGGTCCGACTCGACCATGAC
25 TTAGTTGTAAGGGTGTGTGCGCTTTTTTCAGTCTCATGTGAAAATCCTCCTGTCTCT
GGCAGCACTGTCTGCACTTTCTTGTTTACTGTTTGAAGGGACGAGTACCAAGCCA
CAAGAACACTTCTTTTGGCCACAGCATAAGCTGATGGTATGTAAGGAACCGATG
GGCCATTAAACATGAACTGAACGGTTAAAAGCACAGTCTATGGAACGCTAATGG
AGTCAGCCCCTAAAGCTGTTTGCTTTTTTCAGGCTTTGGATTACATGCTTTTAATTT
30 GATTTTAGAATCTGGACACTTTCTATGAATGTAATTCGGCTGAGAAACATGTTGC
TGAGATGCAATCCTCAGTGTCTCTGTATGTAAATCTGTGTATACACCACACGTT
ACAACCTGCATGAGCTTCCTCTCGCACAAGACCAGCTGGAAGTGAAGCATGAGACG
CTGTCAAATACAGACAAAGGATTTGAGATGTTCTCAATAAAAAGAAAATGTTTC
ACT

35

SEQ ID NO: 343

>2971 BLOOD 198145.6 U51205 g1730283 Human COP9 homolog (HCOP9) mRNA,
complete cds. 0

CGGGCGCGACGCCTGTAGGGACAGTCTGGGGTTTGGCTGTCCGGACGGTGCAGC
40 GGCGAGGCCGGCCGCGAAGATGCCAGTGGCGGTGATGGCGGAAAGCGCCTTTAG
TTTCAAAAAGTTGCTGGATCAGTGCGAGAACCAGGAGCTCGAGGGCCCCTGGAGG
AATTGCTACACCCCCAGTGTATGGTCAGCTTCTAGCTTTATATTTGCTCCATAATG
ACATGAATAATGCAAGATATCTTTGGAAAAGAATACCACCTGCTATAAAATCTGC
AAATTCTGAACTTGGGGGAATTTGGTCAGTAGGACAAAGAATCTGGCAGAGAGA
45 TTTCCCTGGGATCTATACAACCATCAACGCTCACCAGTGGTCTGAGACGGTCCAG
CCAATTATGGAAGCACTTAGAGATGCAACAAGGAGACGCGCCTTTGCCCTGGTCT
CTCAAGCGTATACTTCAATCATCGCCGATGATTTTGCAGCCTTTGTTGGACTTCCT
GTAGAAGAGGCTGTGAAAGGCATATTAGAACAAGGATGGCAAGCTGATTCCACC
ACAAGAATGTTTCTGCCCAGAAAGCCAGTTGCAGGGGCCCTGGATGTTTCCTTTA

ACAAGTTTATTCCCTTATCAGAGCCTGCTCCAGTTCCCCCAATACCCAATGAACA
 GCAGTTAGCCAGACTGACGGATTATGTGGCTTTCCTTGAAAACCTGATTTATCACT
 CTGAGTTCAAGATTCATCTTCAGAATCCTGTATACTGACAAACGTAGAAATGTAA
 AGTTTGTATTTTCAATTTATTGGATGGCTTAAGCACCTCAGCATTCTTACTATGT
 5 GATAAAATACATATAGAATATAAGATATACTATATACATTTTGTCCATAAACGTT
 ATGCTGAATAGTTGTTGAAACAGTTCTCATTTTGTAGTATTTAATAATCTGGATGG
 AGCCTGTCAGTATTACAGTTAGTTTTCTAGTGACTCATAAAATAAGATTTCTGT
 TCATGTAGAATAGTGTTTGTCAACTGTCTTTTCTCTGTCCCAGCACATGCCGTACT
 CTTATATGTACCATTTGGTTGATAATTATAATGATTCATTTGGACTTGAAGAAAGA
 10 TTGTCCCCAGGCACAGTATCTGAATCACTGGGGATTATGATTCACCTCTTTGGA
 GAACATGCTCTCTTTTACCCCCACCTCCTGAGAGCCACTAATGTAAGATACAG
 AAACATAGCTGAGGAACAAATAGACCATTTCCTACTAAACCAGTTTGTTAACTT
 TAGATTTTTTCCAATAGTGTGAGTATATCCATTGCTGGCAGTGGAGGGCTTGCCA
 TGAAAATGCAACTTATTTAAGACATTTATGAGACATATTAAGTTGTGCTGTCGCC
 15 TTTTAGAAGGAGAACTTAAGTGTGGAATGCATTATATGGGCAAAGAAGCTATG
 AAGATACATGATACACTTTGTACAACTATCCTGCAGCCCATTGGTTGCTTATATTT
 ATCGCTTGGCTCAAGTTCTGCCCTTTGGAGAAATACTGAGCAAGTCTTTCATTCTC
 TGTGTGACAGCCCTCTGAATATTTGAAGTTGTTTGTGTAAGTTAAGGTTATAACA
 GCCCTTAGTTTCACTTCTGCATTTGTTCAATAAATATTTAACTGAATTCTTCAA
 20 TTATTTTCATCTAAGATAGTTTCTGGAAATTTCACTCTCGATCTTCTGTGGACACA
 ATCTATTTTGTCTATTGTGTCTATATGAATCTCTTAAGTAGAAATGAGTTGTATGGT
 GAATCTGTGTAGTGATAATTATATAATTTATTTTGAATGCA

SEQ ID NO: 344

25 >2986 BLOOD Hs.75260 gn|UG|Hs#S269695 H.sapiens mitogen inducible gene mig-2,
 complete CDS /cds=(0,2164) /gb=Z24725 /gi=505032 /ug=Hs.75260 /len=3270
 CAAAAAGTGTGTGGAAAGGTGGATTGAGGGAGCGGGACCCCGCGGGACCCGA
 GGGGGCGGCAGGCGGGGAACGGGGAGTCAGCCCGCGCTGTGTCTCGGGGCCGGC
 CGGCAGGAAGGAGCCATGGCTCTGGACGGGATAAGGATGCCAGATGGCTGCTAC
 30 GCGGACGGGACGTGGGAAGTGTGACGGACCTGAACCGCGATATC
 ACCCTGAGAGTGACCGGCGAGGTGCACATTGGAGGCGTGATGCTTAAGCTGGTG
 GAGAACTCGATGTAAAAAAGATTGGTCTGACCATGCTCTCTGGTGGGAAAAG
 AAGAGAACTTGGCTTCTGAAGACACATTGGACCTTAGATAAGTATGGTATTCAGG
 CAGATGCTAAGCTTCAGTTCACCCCTCAGCACAACTGCTCCGCCTGCAGCTTCC
 35 CAACATGAAGTATGTGAAGGTGAAAGTGAATTTCTCTGATAGAGTCTTCAAAGCT
 GTTTCTGACATCTGTAAGACTTTTAATATCAGACACCCCGAAGAACTTCTCTCTT
 AAAGAAACCCAGAGATCCAACAAAGAAAAAAGAAGAAGCTAGATGACCAGT
 CTGAAGATGAGGCACTTGAATTAGAGGGGCCTCTTATCACTCCTGGATCAGGAA
 GTATATATTCAAGCCCAGGACTGTATAGTAAACAATGACCCCCACTTATGATGC
 40 TCATGATGGAAGCCCTTGTACCAACTTCTGCTTGGTTTGGTGACAGTGCTTTGT
 CAGAAGGCAATCCTGGTATACTTGTGTGAGTCAACCAATCACGTACCAGAAAT
 CTTGGCAAAAATGTTCAAGCCTCAAGCTCTTCTTGATAAAGCAAAAATCAACCAA
 GGATGGCTTGATTCTCAAGATCTCTCATGGAACAAGA\TGTGAAGGAAAATGAG
 GCCTTGCTGCTCCGATTCAAGTATTACAGCTTTTTTGAATTCCAAAGTATGA
 45 TGCAATCAGAATCAATCAGCTTTATGAGCAGGCCAAATGGGCCATTCTCCTGGAA
 GAGATTGAATGCACAGAAGAAGAAATGATGATGTTTGCAGCCCTGCAGTATCAT
 ATCAATAAGCTGTCAATCATGACATCAGAGAATCATTTGAACAACAGTGACAAA
 GAAGTTGATGAAGTTGATGCTGCCCTTTCAGACCTGGAGATTACTCTGGAAGGGG
 GTAAAACGTCAACAATTTTGGGTGACATTACTTCCATTCTGAAGTTGCTGACTA

CATTAAAGTTTTCAAGCCAAAAAAGCTGACTCTGAAAGGTTACAAACAATATTG
 GTGCACCTTCAAAGACACATCCATTTCTTGTTATAAGAGCAAAGAAGAATCCAGT
 GGCACACCAGCTCATCAGATGAACCTCAGGGGATGTGAAGTTACCCAGATGTA
 AACATTTTCAGGCCAAAAATTTAACATTAAACTCCTGATTCCAGTTGCAGAAGGCA
 5 TGAATGAAATCTGGCTTCGTTGTGACAATGAAAAACAGTATGCACACTGGATGG
 CAGCCTGCAGATTAGCCTCCAAAGGCAAGACCATGGCGGACAGTTCTTACAACCTT
 AGAAGTTCAGAATATTCTTTCCTTTCTGAAGATGCAGCATTTAAACCCAGATCCT
 CAGTTAATACCAGAGCAGATCACGACTGATATAACTCCTGAATGTTTGGTGTCTC
 CCCGCTATCTAAAAAAGTATAAGAACAAGCAGATAACAGCGAGAATCTTGGAGG
 10 CCCATCAGAATGTAGCTCAGATGAGTCTAATTGAAGCCAAGATGAGATTTATTCA
 AGCTTGGCAGTCACTACCTGAATTTGGCATCACTCACTTCATTGCAAGGTTCCAA
 GGGGGCAAAAAAGAAGAAGTATTGGAATTGCATACAACAGACTGATTCGGATG
 GATGCCAGCACTGGAGATGCAATTAACACATGGCGTTTCAGCAACATGAAACAG
 TGAATGTCAACTGGGAAATCAAATGGTCACCGTAGAGTTTGCAGATGAAGTA
 15 CGATTGTCCTTCATTTGTACTGAAGTAGATTGCAAAGTGGTTCATGAATTCATTG
 GTGGCTACATATTTCTCTCAACACGTGCAAAAGACCAAAACGAGAGTTTAGATG
 AAGAGATGTTCTACAACTTACCAGTGGTTGGGTGTGAATAGAAATACTGTTTAA
 TGAAACTCCACGGCCATAACAATATTTAACTTTAAAGCTGTTTGTATATGCTG
 CTTAATAAAGTAAGCTTGAAATTTATCATTTTATCATGAAAACCTCTTTGCCTTAC
 20 CAGACCAGTTAATATGTGCACTAAACAAGCACGACTATTAATCTATCATGTTATG
 ATATAATAAACTTGAATTTGGCACACATTCCTTAGGGCCATGAATTGAAAACCTGA
 AATAGTGGGCAAAATCAGGAACAAACCATCACTGATTTACTGATTTAAGCTAGCC
 AACTGTAAGAAACAAGCCATCTATTTTAAAGCTATCCAGGGCTTAACCTATATG
 AACTCTATTTATCATGTCTAATGCATGTGATTTAATGTATGTTTAATTTGATATCA
 25 TGTTTTAAATATCCTACTTCTGGTAGCCATTTAATTCCTCCCCCTACCCCCAAAT
 AAATCAGGCATGCAGGAGGCCTGATATTTAGTAATGTCATTGTGTTTGACCTTGA
 AGGAAAATGCTATTAGTCCGTCGTGCTTNATTTGTTTTTGTCTTGAATAAGCATG
 TTATGTATATNGTCTCGTGTTTTTATTTTACACCATATTGTATTACACTTTTAGTA
 TTCACCAGCATAANCACTGTCTGCCTAAAATATGCAACTCTTTGCATTACAATAT
 30 GAAGTAAAGTTCTATGAAGTATGCATTTTGTGTAACTAATGTAAAAACACAAATT
 TTATAAAATTGTACAGTTTTTTAAAACTACTCACAACCTAGCAGATGGCTTAAAT
 GTAGCAATCTCTGCGTTAATTAATGCCTTTAAGAGATATAATTAACGTGCAGTT
 TTAATATCTACTAAATTAAGAATGACTTCATTATGATCATGATTTGCCACAATGTC
 CTTAACTCTAATGCCTGGACTGGCCATGTTCTAGTCTGTTGCGCTGTTACAATCTG
 35 TATTGGTGCTAGTCAGAAAATTCCTAGCTCACATAGCCCAAAGGGTGCGAGGG
 AGAGGTGGATTACCAGTATTGTTCAATAATCCATGGTTCAAAGACTGTATAAATG
 CATTTTATTTTAAATAAAAGCAAACTTTTATTTAAA

SEQ ID NO: 345

40 >2992 BLOOD 1329299.6 AF053944 g3288915 Human aortic carboxypeptidase-like protein
 ACLP mRNA, complete cds. 0
 GAGGACTATGAGGACTGTGAGTAGGGTCCTGCCAGCCCCACCTGGGTCGGACCC
 CTGGCCTGGGGGATGTGCCAATGGGCCCATCCCAGCCTTGGGCCCCACTCTGAGC
 CAGCCTCCCCCTCAGTTGAGTACATTCGGCGCCAGAAGCAACCCAGGCCACCCCC
 45 AAGCAGAAGGAGGAGGCCCGAGCGGGTCTGGCCAGACCCCCCTGAGGAGAAGG
 CCCCAGCCCCAGCCCCGAGGAGAGGATTGAGCCTCCTGTGAAGCCTCTGCTGCC
 CCCGCTGCCCCCTGACTATGGTGATGGTTACGTGATCCCCAACTACGATGACATG
 GACTATTACTTTGGGCCTCCTCCGCCCCAGAAGCCCGATGCTGAGCGCCAGACGG
 ACGAAGAGAAGGAGGAGCTGAAGAAACCCAAAAAGGAGGACAGCAGCCCCAAG

GAGGAGACCGACAAGTGGGCAGTGGAGAAGGGCAAGGACCACAAAGAGCCCCG
AAAGGGCGAGGAGTTGGAGGAGGAGTGGACGCCTACGGAGAAAGTCAAGTGTC
CCCCATTGGGATGGAGTCACACCGTATTGAGGACAACCAGATCCGAGCCTCCTC
CATGCTGCGCCACGGCCTGGGGGCACAGCGCGCGGCTCAACATGCAGACCGG
5 TGCCACTGAGGACGACTACTATGATGGTGGTGGTGGTGGCCGAGGACGATGCCAG
GACCCAGTGGATAGAGGTGGACACCAGGAGGACTACCCGGTTCACAGGCGTCAT
CACCCAGGGCAGAGACTCCAGCATCCATGACGATTTTGTGACCACCTTCTTCGTG
GGCTTCAGCAATGACAGCCAGACATGGGTGATGTACACCAACGGCTATGAGGAA
ATGACCTTTCATGGGAACGTGGACAAGGACACACCCGTGCTGAGTGAGCTCCCA
10 GAGCCGGTGGTGGCTCGTTTCATCCGCATCTACCCACTCACCTGGAATGGCAGCC
TGTGCATGCGCCTGGAGGTGCTGGGGTGGTCTGTGGCCCTGTCTACAGCTACTA
CGCACAGAATGAGGTGGTGGCCACCGATGACCTGGATTTCGGGCACCACAGCTA
CAAGGACATGCGCCAGCTCATGAAGGTGGTGAACGAGGAGTGCCCCACCATCAC
CCGCACTTACAGCCTGGGCAAGAGCTCACGAGGCCTCAAGATCTATGCCATGGA
15 GATCTCAGACAACCCTGGGGAGCATGAACTGGGGGAGCCCGAGTTCGGCTACAC
TGCTGGGATCCATGGCAACGAGGTGCTGGGCCGAGAGCTGTTGCTGCTGCTCATG
CAGTACCTGTGCCGAGAGTACCGCGATGGGAACCCACGTGTGCGCACGCTGGTG
CAGGACACACGCATCCACCTGGTGGCCTCACTGAACCCTGATGGCTACGAGGTG
GCAGCGCAGATGGGCTCAGAGTTTGGGAACCTGGGCGCTGGGACTGTGGACTGAG
20 GAGGGCTTTGACATCTTTGAAGATTTCCCGGATCTCAACTCTGTGCTCTGGGGAG
CTGAGGAGAGGAAATGGGTCCCCTACCGGGTCCCCAACAATAACTTGCCCATCC
CTGAACGCTACCTTTCGCCAGATGCCACGGTATCCACGGAGGTCCGGGCCATCAT
TGCCTGGATGGAGAAGAACCCTTCGTGCTGGGAGCAAATCTGAACGGCGGCGA
GCGGCTAGTATCCTACCCCTACGATATGGCCCGCACGCCTACCCAGGAGCAGCTG
25 CTGGCCGCAGCCATGGCAGCAGCCCGGGGGGAGGATGAGGACGAGGTCTCCGAG
GCCCAGGAGACTCCAGACCACGCCATCTTCCGGTGGCTTGCCATCTCCTTCGCCT
CCGCACACCTCACCTTGACCGAGCCCTACCGCGGAGGCTGCCAAGCCCAGGACT
ACACCGGCGGCATGGGCATCGTCAACGGGGCCAAGTGGAACCCCCGGACCGGGA
CTATCAATGACTTCAGTTACCTGCATACCAACTGCCTGGAGCTCTCCTTCTACCTG
30 GGCTGTGACAAGTTCCCTCATGAGAGTGAGCTGCCCCGCGAGTGGGAGAACAAC
AAGGAGGCGCTGCTCACCTTCATGGAGCAGGTGCACCGTGGCATTAAAGGGGGTG
GTGACGGACGAGCAAGGCATCCCCATTGCCAACGCCACCATCTCTGTGAGTGGC
ATTAATCACGGCGTGAAGACAGCCAGTGGTGGTGATTACTGGCGAATCTTGAAC
CCGGGTGAGTACCGCGTGACAGCCACGCGGAGGGCTACACCCCGAGCGCCAAG
35 ACCTGCAATGTTGACTATGACATCGGGGCCACTCAGTGCAACTTCATCCTGGCTC
GCTCCAATGGAAGCGCATCCGGGAGATCATGGCCATGAACGGGAACCGGCCTA
TCCCACACATAGACCCATCGCGCCCTATGACCCCCCAACAGCGACGCCTGCAGCA
GCGACGCCTACAACACCGCCTGCGGCTTCGGGCACAGATGCGGCTGCGGCGCCT
CAACGCCACCACCACCCTAGGCCCCACACTGTGCCTCCCACGCTGCCCCCTGCC
40 CCTGCCACCACCCTGAGCACTACCATAGAGCCCTGGGGCCTCATACCGCCAACCA
CCGCTGGCTGGGAGGAGTCGGAGACTGAGACCTACACAGAGGTGGTGACAGAGT
TTGGGACCGAGGTGGAGCCCGAGTTTGGGACCAAGGTGGAGCCCGAGTTTGAGA
CCCAGTTGGAGCCTGAGTTTGAGACCCAGCTGGAACCCGAGTTTGAGGAAGAGG
AGGAGGAGGAGAAAGAGGAGGAGATAGCCACTGGCCAGGCATTCCCCTTCACA
45 ACAGTAGAGACCTACACAGTGAACCTTGGGGACTTCTGAGATCAGCGTCCTACCA
AGACCCCAGCCCAACTCAAGCTACAGCAGCAGCACTTCCAAGCCTGCTGACCA
CAGTCACATCACCCATCAGCACATGGAAGGCCCTGGTATGGCACTGAAAGGA
AGGGCTGGTCTGCCCCCTTTGAGGGGGTGCAAACATGACTGGGACCTAAGAGCC
AGAGGCTGTGTAGAGGCTCCTGCTCCACCTGCCAGTCTCGTAAGAGATGGGGTTG

CTGCAGTGTGGAGTAGGGGCAGAGGGAGGGAGCCAAGGTCCTCCAATAAAAC
AAGCTCATGGCAAAAAAAAAA

SEQ ID NO: 346

5 >3030 BLOOD GB_AA486221 gi|2216437|gb|AA486221|AA486221 ab35e07.s1 Stratagene
HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:842820 3', mRNA sequence
[Homo sapiens]
CTTTATTGGGAAACGTAAGACTTGGGTACATCAAATAAAACCAATTTCTGGGGGA
AAAAATCAAAACCCA
10 CAATAAAAAAAAAAAGTTAACTGTCTGGGCCACAGCAGAACCCAAAGAACATAT
TCGTATAAT

SEQ ID NO: 347

>3033 BLOOD 371542.10 M93056 g188621 Human monocyte/neutrophil elastase inhibitor
15 mRNA sequence. 0
CTCACTTCTGCTTGCCTTAGGGCGACCTCGGGAGCTCGGACTCCTACGCAGTCAC
CGGGAAGGGCCGCGCCCGCCCGCGGCTGCTGGCCCGGGTGACACTTCCGCCT
GCTATAAGAGCAGCGGCCCTCGGTGCCTCCTTCCTGACCTCGCACCAGCTCGGA
GCCCGGAGCGTGCCTCGGGCGGCCTGTCGGTTTTACCATGGAGCAGCTGAGCTC
20 AGCAAACACCCGCTTCGCCTTGGACCTGTTGCCTGGCGTTGAGTGAGAACAATCC
GGCTGGAAACATCTTCATCTCTCCCTTCAGCATTTTCATCTGCTATGGCCATGGTTT
TTCTGGGGACCAGAGGTAACACGGGACGACAGCTGTCCAAGACTTTCCATTTCAA
CACGGTTGAAGAGGTTTCATTCAAGATTCCAGAGTCTGAATGCTGATATCAACAAA
CGTGGAGCGTCTTATATTCTGAAACTTGCTAATAGATTATATGGAGAGAAAACTT
25 ACAATTTCTTCCTGAGTTCTTGGTTTCGACTCAGAAAACATATGGTGCTGACCTG
GCCAGTGTGGATTTTCAGCATGCCTCTGAAGATGCAAGGAAGACCATAAACCAG
TGGGTCAAAGGACAGACAGAAGGAAAAATTCCGGAAGTGTGGCTTCGGGCATG
GTTGATAACATGACCAAACCTTGTGCTAGTAAATGCCATCTATTTCAAGGGAACT
GGAAGGATAAATTCATGAAAGAAGCCACGACGAATGCACCATTTCAGATTGAATA
30 AGAAAGACAGAAAACTGTGAAAATGATGTATCAGAAGAAAAAATTTGCATATG
GCTACATCGAGGACCTTAAGTGCCGTGTGCTGGAAGTGCCTTACCAAGGCGAGG
AGCTCAGCATGGTCATCCTGCTGCCGGATGACATTGAGGACGAGTCCACGGGCCT
GAAGAAGATTGAGGAACAGTTGACTTTGAAAAAGTTGCATGAGTGGACTAAACC
TGAGAATCTCGATTTTCATTGAAGTTAATGTCAGCTTGCCCAGGTTCAAACCTGGAA
35 GAGAGTTACACTCTCAACTCCGACCTCGCCCGCCTAGGTGTGCAGGATCTCTTTA
ACAGTAGCAAGGCTGATCTGTCTGGCATGTCAGGAGCCAGAGATATTTTTATATC
AAAAATTGTCCACAAGTCATTTGTGGAAGTGAATGAAGAGGGAACAGAGGCGGC
AGCTGCCACAGCAGGCATCGCAACTTTCTGCATGTTGATGCCCGAAGAAAAATTC
ACTGCCGACCATCCATTCCTTTTCTTTATTTCGGCATAATTCCTCAGGTAGCATCCT
40 ATTCTTGGGGAGATTTTCTTCCCCTTAGAAGAAAGAGACTGTAGCAATACAAAAA
TCAAGCTTAGTGCTTTATTACCTGAGTTTTTAATAGAGCCAATATGTCTTATATCT
TTACCAATAAAACCACTGTTTCAGAAAAA

SEQ ID NO: 348

45 >3050 BLOOD 243794.24 Y00345 g35569 Human mRNA for polyA binding protein. 0
CCTTCTCCCCGGCGGTTAGTGCTGAGAGTGCGGAGTGTGTGCTCCGGGCTCGGAA
CACACATTTATTATTAATAAAATCCAAAAAAATCTAAAAAAATCTTTTAAAAAAC
CCCAAAAAAATTTACAAAAAATCCGCGTCTCCCCCGCCGGAGACTTTTATTTTTT
TTCTTCCTCTTTTATAAAATAACCCGGTGAAGCAGCCGAGACCGACCCGCCCGCC

CGCGGCCCCGCAGCAGCTCCAAGAAGGAACCAAGAGACCGAGGCCTTCCCGCTG
 CCCGGACCCGACACCGCCACCCTCGCTCCCCGCCGGCAGCCGGCAGCCAGCGGC
 AGTGGATCGACCCCGTTCTGCGGCCGTTGAGTAGTTTTCAATTCCGGTTGATTTTT
 GTCCCTCTGCGCTTGCTCCCCGCTCCCCTCCCCCGGCTCCGGCCCCCAGCCCCGG
 5 CACTCGCTCTCCTCCTCTCACGGAAAGGTCGCGGCCTGTAGAACTCGCCAGCCGT
 GCCGAGATGAACCCCAAGTGCCCCCAGCTACCCCATGGCCTCGCTCTACGTGGGGG
 ACCTCCACCCCGACGTGACCGAGGCGATGCTCTACGAGAAGTTCAGCCCGGCCG
 GGCCCATCCTCTCCATCCGGGTCTGCAGGGACATGATCACCCGCGCTCCTTGGG
 CTACGCGTATGTGAACTTCCAGCAGCCGGCGGACGCGGAGCGTGCTTTGGACAC
 10 CATGAATTTTGATGTTATAAAGGGCAAGCCAGTACGCATCATGTGGTCTCAGCGT
 GATCCATCACTTCGCAAAAAGTGGAGTAGGCAACATATTCATTAAAAATCTGGAC
 AAATCCATTGATAATAAAGCACTGTATGATACATTTTCTGCTTTTGGTAACATCCT
 TTCATGTAAGGTGGTTTGTGATGAAAATGGTTCCAAGGGCTATGGATTTGTACAC
 TTTGAGACGCAGGAAGCAGCTGAAAGAGCTATTGAAAAAATGAATGGAATGCTC
 15 CTAATGATCGCAAAGTATTTGTTGGACGATTTAAGTCTCGTAAAGAACGAGAA
 GCTGAACTTGAGCTAGGGCAAAGAATTACCAATGTTTACATCAAGAATTTTG
 GAGAAGACATGGATGATGAGCGCCTTAAGGATCTCTTTGGCAAGTTTGGGCCTGC
 CTTAAGTGTGAAAGTAATGACTGATGAAAGTGGAATAATCCAAAGGATTTGGATT
 TGTAAGCTTTGAAAGGCATGAAGATGCACAGAAAGCTGTGGATGAGATGAACGG
 20 AAAGGAGCTCAATGGAAAACAAATTTATGTTGGTCGAGCTCAGAAAAAGGTGGA
 ACGGCAGACGGAACCTTAAGCGCAAATTTGAACAGATGAAACAAGATAGGATCAC
 CAGATACCAGGGTGTTAATCTTTATGTGAAAAATCTTGATGATGGTATTGATGAT
 GAACGTCTCCGAAAGAGTTTCTCCATTEGGTACAATCACTAGTGCAAAGGTTA
 TGATGGAGGGTGGTCGCAGCAAAGGGTTTGGTTTTGTATGTTTCTCCTCCCCAGA
 25 AGAAGCCACTAAAGCAGTTACAGAAATGAACGGTAGAATTGTGGCCACAAAGCC
 ATTGTATGTAGCTTTAGCTCAGCGCAAAGAAGAGCGCCAGGCTCACCTCACTAAC
 CAGTATATGCAGAGAATGGCAAGTGTACGAGCTGTTCCCAACCCTGTAATCAACC
 CCTACCAGCCAGCACCTCCTTCAGGTACTTCATGGCAGCTATCCCACAGACTCA
 GAACCGTGCTGCATACTATCCTCCTAGCCAAATTGCTCAACTAAGACCAAGTCCT
 30 CGCTGGACTGCTCAGGGTGCCAGACCTCATCCATTCCAAAATATGCCCGGTGCTA
 TCCGCCCAGCTGCTCCTAGACCACCATTTAGTACTATGAGACCAGCTTCTTCACA
 GGTTCCACGAGTCATGTCAACACAGCGTGTTGCTAACACATCAACACAGACAAT
 GGGTCCACGTCCTGCAGCTGCAGCCGCTGCAGCTACTCCTGCTGTCCGCACCGTT
 CCACAGTATAAATATGCTGCAGGAGTTCGCAATCCTCAGCAACATCTTAATGCAC
 35 AGCCACAAGTTACAATGCAACAGCCTGCTGTTTCATGTACAAGGTCAGGAACCTTT
 GACTGCTTCCATGTTGGCATCTGCCCCCTCCTCAAGAGCAAAAAGCAAATGTTGGGT
 GAACGGCTGTTTCCTCTTATTCAAGCCATGCACCCTACTCTTGCTGGTAAAATCAC
 TGGCATGTTGTTGGAGATTGATAATTCAGAACTTCTTCATATGCTCGAGTCTCCA
 GAGTCACTCCGTTCTAAGGTTGATGAAGCTGTAGCTGTACTACAAGCCCACCAAG
 40 CTAAAGAGGCTGCCAGAAAGCAGTTAACAGTGCCACCGGTGTTCCAAGTGTTA
 AAATTGATCAGGGACCATGAAAAGAACTTGTGCTTCACCGAAGAAAAAATATCT
 AAACATCGAAAAACTTAAATATTATGGAAAAAAACATTGCAAAATATAAAATA
 AATAAAAAAAGGAAAGGAAACTTTGAACCTTATGTACCGAGCAAATGCCAGGTC
 TAGCAAACATAATGCTAGTCCTAGATTACTTATTGATTTAAAAACAAAAAACAC
 45 AAAAAAATAGTAAATATAAAAAACAAATTAATGTTTTATAGACCTGGGAAAAA
 GAATTTTCAGCAAAGTACAAAAATTTAAAGCATTCTTTCTTTAATTTTGTAATTC
 TTTACTGTGGAATAGCTCAGAATGTCAGTTCTGTTTTAAGTAACAGAATTGATAA
 CTGAGCAAGGAAACGTAATTTGGATTATAAAATCTTGCTTTAATAAAAAATTCCT
 TAAACAGTGCACGGATTTGCTTTTTTTCAAAGTCTTTATAATTGCCATGCATAAAT

5

>3052 BLOOD 988653.1 X52541 g31129 Human mRNA for early growth response protein 1 (hEGR1). 0

10

15

20

2.5

30

35

40

45

GATTTTGGATAAATCATTTCAGTATCATCTCCATCATATGCCTGACCCCTTGCTCC
 CTTCAATGCTAGAAAATCGAGTTGGCAAAATGGGGTTTGGGCCCCCTCAGAGCCCT
 GCCCTGCACCCTTGACAGTGTCTGTGCCATGGATTTTCGTTTTTCTTGGGGTACTC
 TTGATGTGAAGATAATTTGCATATTCTATTGTATTATTTGGAGTTAGGTCCTCACT
 5 TGGGGGAAAACCACAAAAGGAAAAGCCAAGCAAACCAATGGTGATCCTCTATTT
 TGTGATGATGCTGTGACAATAAGTTTGAACCTTTTTTTTTTGAACAGCAGTCCCA
 GTATTCTCAGAGCATGTGTCAGAGTGTGTTCCGTTAACCTTTTTGTAAATACTGC
 TTGACCGTACTCTCACATGTGGCAAAATATGGTTTGGTTTTTCTTTNTTTTTTTTT
 TGAAAGTGTTTTTTCTTCGTCCTTTTGGTTTAAAAAGTTTCACGTCTTGGTGCCCTT
 10 TGTGTGATGCGCCTTGCTGATGGCTTGACATGTGCAATTGTGAGGGACATGCTCA
 CCTCTAGCCTTAAGGGGGGCGAGGGAGTGATGATTTGGGGGAGGCTTTGGGAGCA
 AAATAAGGAAGAGGGGCTGAGCTGAGCTTCGGTTCTCCAGAATGTAAGAAAACAA
 AATCTAAAACAAAATCTGAACCTCTCAAAAGTCTATTTTTTTAACTGAAAATGTAA
 ATTTATAAATATATTCAGGAGTTGGAATGTTGTAGTTACCTACTGAGTAGGCGGC
 15 GATTTTTGTATGTTATGAACATGCAGTTCATTATTTTGTGGTTCTATTTTACTTTGT
 ACTTGTGTTTGCTTAAACAAAGTGACTGTTTGGCTTATAAACACATTGAATGCGC
 TTTATTGCCCATGGGATATGTGGTGTATATCCTTCCAAAAAATTAAAACGAAAAT
 AAAGTAGCTGCGATTGGGTATGTGTTTCTGGGTAGGGGAAGGACTCTGCCCTA
 TTGAGGGCTGTGAGGTTTTCTGAAGACTTGGCCTTATAGAGATACAAGGATCCTCC
 20 AGCCAGAGTCAGGCCCACTGTGTGAAACTGGAGTTCGTTATTTATGAGGACTGAG
 TATGGGNN
 NNN
 NNN
 NNTTC
 25 TTGATAATGGGCCTGTTCTCTTCAGTCTGTTGGGCTGAAGCTTTACCTTGGTTAG
 CTAAGCCAAGAAAGGCAAGAGTTAGGGCTGGGACATGTGTGGCCAAAGGCAGT
 GTTACTCTCCTGGCATCAAATGTTGGGCCAGTCCCGTCCCCACCTCTACTCAGG
 GTTGGAAAACCCATGATCTTGGGAATCCCTGCCATGTGCAGTTAGAGGAGGTAA
 GAAGTAGGCACAAGGCCTTTAGGGGAACAGTAACAATGCTGGGGCCGACTCAGC
 30 CTCTCCCTCCCATTCCTCCAGGTCCCCAGCAACTTGAGGGCATCAAAGAAGCCTAG
 ACGAGGTAAAGGCCAGTTCTCAAGCCAAGAATCCTTCCAGGAAGAAATTCTTATT
 ACTTGCCAGCTGGAAGTGCATCCTTGGCAGCTTCGTGGGACAAAGGATAGAGT
 GGGCAGAAGCCTGGCCTGGTGTCTAAAGTTCCCATCCGGGCCAAATCTGTTCCCA
 TTGTGTAGGAGGCCTGAGGTTCTAGGTTCTTTTGGGCC

SEQ ID NO: 350

>3057 BLOOD 346395.5 AF187016 g6601393 Human myosin regulatory light chain
interacting protein MIR mRNA, complete cds. 0

CGCCACCGCGGAGGACAGGTGCAGCTGGCGGGCAGCGGGTGAGGGGGTGGCGG
 40 GGACGCGAGTGGCGGCCGCGGGGCCCCGGACAAGGGTCCGCAGAGCTGCAGCCT
 TCGAGGGCCAGCCCTCTCCGAGTCCGGGGCTGGGTCCCACCAAGTGACAAGGCGG
 CAGCCCCGCGCACACCAAGAGAAGGCGGCTGTGGCGGCAGCGGCAGCCCCAGC
 CATGCTGTGTTATGTGACGAGGCCGACGCGGTGCTGATGGAGGTGGAGGTGGA
 GCGGAAAGCCAACGGCGAGGACTGCCTCAACCAGGTGTGCAGGCGACTGGGAAT
 45 CATAGAAGTTGACTATTTTGGACTGCAGTTTACGGGTAGCAAAGGTGAAAGTTTA
 TGGCTAAACCTGAGAAACCGGATCTCCAGCAGATGGATGGGCTAGCCCCCTTAC
 AGGCTTAAACTTAGAGTCAAGTTCTTCGTGGAGCCTCATCTCATCTTACAGGAGC
 AGACTAGGCATATCTTTTCTTGACATCAAGGAGGCCCTCTTGGCAGGCCACCT
 CTTGTGTTCCCCAGAGCAGGCAGTGGAAGTCAAGTCCCTCCTGGCCCAGACCAAG

TTTGGAGACTACAACCAGAACACTGCCAAGTATAACTATGAGGAGCTCTGTGCC
AAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTGG
AGGGGACCAGCCAGGCTTCAGCTGAATACCAAGTTTTGCAGATTGTGTGCGCAAT
GGAAACTATGGCATAGAATGGCATTCTGTGCGGGATAGCGAAGGGCAGAACT
5 GCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAAGATGACTTTAGCCCA
ATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAAT
GTATATTTGACGGTCACCAAGGAATCTGGGAACAGCATCGTGCTCTTGTTTAAAA
TGATCAGCACCAGGGCGGCCAGCGGGCTCTACCGAGCGATAACAGAGACGCACG
CATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTATAGCCGTG
10 ACTTGAAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGCAA
GAAATATGTCTTTGATATTAAGAAGAACATCAAAGGAGGTGTATGACCATGCCAG
GAGGGCTCTGTACAATGCTGGCGTTGTGGACCTCGTTTCAAGAAGCAACCAGAG
CCCTTCACACTCGCCTCTGAAGTCCTCAGAAAGCAGCATGAACTGCAGCAGCTGC
GAGGGCCTCAGCTGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTG
15 AAGGAAGCCATGCTGTGCATGGTGTGCTGCGAGGAGGAGATCAACTCCACCTTC
TGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCGCCAGCTACAGTCAT
GTCCCGTCTGCAGGTGCGGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCA
CACCAGTCTTCTCAATCTGACTGTAATCTAATCTGTTGTGCTTTTGTGGACTTGG
CATGTTTCCATGAACTGCACTATTATAAACTATTAATAATGATAGATTGTGGAGAA
20 AGTAATTATTCCAACACCCATCTGCCATGCGATGTTAAAAAAAAAAAAAAGGAA
GAAAAATAACACAGCTACTCCTCACTGCAAAAACATATCCATGCGTAGAATCAA
CAACTCCAGTCATGGGACCAGGAGGAGCTCTGGGACGCAGACACATTCCTTGGAA
TGTGTGATTTTTTTTATGATCTAGTAAAGGAATAGGTAAAGTCTTTGATGTCAGTGA
AGTGGCAACATAGCCAAAAAGTTGGGTACCTTTTAGGAAATGATGTTGTAAGTCT
25 CCTTAATGTATCCTGAGGTAAGTTTCTACTGGCAGCAGATTTTGTAAAGATTAC
TTTTAAGAATTTTCAATCTTTTTGTATGGTCATGGAGCTCCAACCATTTTAAATAGG
AAAGTCTTTTGTAAATTGTTGTCGTTTTAATGTCATTTCTGTCTTTATAACTTGATC
AAGAATGATTGGAAGGCAAACAGGTTTACAAATCAATTCTGTGACTTTTAAAAA
GTTGACAATGTTGTCAGATTTAAACCAGTGTGGCTAGTAAAAAGCAGCTCACTCA
30 ATGTGGGTGGCTCCCTATTCCTTTACGCTCCCCCTATCCCTACCCCAAGCCTTT
CGATTATAAAATACTACCAATCTTGTTATAAGATTACTGTGGAGTAGTCAAGTAC
TCCCCGGGCCTTCTGAGCTGGTGGAAATATTTTATTTTCAAGACTGAAAACAGAGAGC
ACTCTCCTTGGGAAGGGAAAGCGGAGCTTGCTGAGTGAGAGATGGAGCCTCATG
GTGTACAACTGAGGGTAGTTAACTCATCACTTCTCCCAAGCACTCGATCCCAGCT
35 TCACCCACTGGTGTGCTTTGCTTGAAGTGTCAAGCCTTTTATAGCCTTACCATA
AGTATTTAGATATGGTGTCCCTTTTCTGTTTTTGGGGGGGGAGTTTTGTTGTGTTTT
TTTAAAGTAAGTGCTTAAGTATTAACCTTGGGTTGTCCCCTCTGTATGTTTCGAAG
GGGTTTTGTTTCTTTTTGCTTCTGTTTTCTTAAACATGTTTTCCACTCCCACTTGGG
CATTTTGGGAAGCTGGTCAGCTAGCAGGTTTTCTGGGATGTCGGGAGACCTAGATG
40 ACCTTATCGGGTGCAATACTAGCTAAGGTAAAGCTAGAAACCTACACTGTCACTT
TACTGAGATTTCTGAGTATACTTTTCATATTGCCTTAATGTAGCAGTAATGTGTTT
ATGCATTTGTTTCTTTGCACAGACATTTTGTCAAATATTAATACTCTACTTTTTTA
TGGCACATATTAGCATATAAGCCTTTATTCCAAGAGGTATTTATTTTTTCACTTGT
AAAAAAATAATGTTTCCACGTAAAGAAGTCTGTTATATCCTAGAGGACTCTGTCT
45 TTTATATTCGGGATAATAAAGACTTTAAAGC

SEQ ID NO: 351

>3072 BLOOD 1327030.1 U26162 g829622 Human myosin regulatory light chain mRNA,
complete cds. 0

CGGAGCTACCAAAGGAGTGGGGGACGAGGGCCGGGCTGCGGGCGACCGCCGCA
GCGCAGGCCGCGATATCGCAGCGGATCGGAGCAGGCCGGAGGGGCAATTAAGA
CCCCGGCCGTGTGCGTCCGGCCCTCAGCAGCCCCGCCGCTCGGGCGGACACGCAGA
CCCCGCCGGCCCGGGCGCGAACACTCAGCGCACCCCCGTTCCACTTGGTCCCGCC
5 GCGCCTTCCGGTGC GCCTTCCGGTGC GCCTTCCGGTCCGCCCTTCAGGCAGGAA
GTGTCGGCGCCGCCACTGTCCGGCCACAGCCTAACGCTCTTCGCTGTCGTTTGTG
GTCTCGCGCAGGGCGGCCCGGTTCTGGTGTGTTGGCGTCGGAATTAACAACAC
CATGTCGAGCAAAAAGGCAAAGACCAAGACCACCAAGAAGCGCCCTCAGCGTGC
AACATCCAATGTGTTTGCCATGTTTGACCAGTCACAGATTCAGGAGTTCAAAGAG
10 GCCTTCAACATGATTGATCAGAACAGAGATGGCTTCATCGACAAGGAAGATTTG
CATGATATGCTTGCTTCTCTAGGGAAGAATCCCACTGATGCATACCTTGATGCCA
TGATGAATGAGGCCCCAGGGCCCATCAATTTACCATGTTTCTGACCATGTTTGG
TGAGAAGTTAAATGGCACAGATCCTGAAGATGTCATCAGAAACGCCTTTGCTTGC
TTTGATGAAGAAGCAACAGGCACCATTACAGGAAGATTACCTAAGAGAGCTGCTG
15 ACAACCATGGGGGATCGGTTTACAGATGAGGAAGTGGATGAGCTGTACAGAGAA
GCACCTATTGACAAAAAGGGGAATTTCAATTACATCGAGTTCACACGCATCCTGA
AACATGGAGCCAAAGACAAAGATGACTGAAAGAAGTTTAGCTAAAATCTTCCAG
TTACATTGTCTTACTCTCTTTTACTTCTCAGACACTTCCCCCACCCTCATAGAACC
TGTTGCATGCAACTTAGTTTCACAGCTTTGCCTCTTCTTTTGTATGATTTTATTCCA
20 GACCTTTCTGCCACTTAGCACTTGTATAATCAGACTGGAAATGGGGATGAGGGTG
TAAATTGTATTGAAAAAGATCGCGAATAAAAAATCAACAAATGTGAAAGCCCAGA
AAAAATATATTCGTATTTCTGGTFTTGCTGGATTTTACATTTTATATAATAAAAA
TGTTATTTTGAAATAAAGATTATGCTGACTCAAATGC

25 SEQ ID NO: 352

>3210 BLOOD 1095563.3 D00762 g220027 Human mRNA for proteasome subunit HC8. 0
TTTGCGGCATCCTGTGGTATAGGGGAAGCGCTCCGGGCCTGGAATCCCTACGCGT
CCCTTTGGGTTTAGCACGATGAGCTCAATCGGCACTGGGTATGACCTGTCAGCCT
CTACATTCTCTCCTGACGGAAGAGTTTTTCAAGTTGAATATGCTATGAAGGCTGT
30 GGAAAATAGTAGTACAGCTATTGGAATCAGATGCAAAGATGGTGTGTTGTTGG
GGTAGAAAAATTAGTCCTTTCTAAACTTTATGAAGAAGGTTCCAACAAAAGACTT
TTAATGTTGATCGGCATGTTGGAATGGCAGTAGCAGGTTTGTGTTGGCAGATGCTC
GTTCTTTAGCAGACATAGCAAGAGAAGAAGCTTCCAACCTTCAGATCTAACTTTGG
CTACAACATTCCACTAAAACATCTTGACAGACAGAGTGGCCATGTATGTGCATGCA
35 TATACTCTACAGTGCTGTTAGACCTTTTGGCTGCAGTTTCATGTTAGGGTCTTA
CAGTGTGAATGACGGTGCGCAACTCTACATGATTGACCCATCAGGTGTTTCATAC
GGTTATTGGGGCTGTGCCATCGGCAAAGCCAGGCAAGCTGCAAAGACGGAAATA
GAGAAGCTTCAGATGAAAGAAATGACCTGCCGTGATATCGTTAAAGAAGTTGCA
AAAATAATTTACATAGTACATGACGAAGTTAAGGATAAAGCTTTTGAAGTAGAA
40 CTCAGCTGGGTTGGTGAATTAATACTAATGGAAGACATGAAATTGTTCCAAAAGAT
ATAAGAGAAGAAGCAGAGAAATATGCTAAGGAATCTCTGAAGGAAGAAGATGA
ATCAGATGATGATAATATGTAACATTTACTCCAGCATCTATTGTATTTTAAATTC
TACTCCAGTCCAATGTAACATTTAGCCCTGGATTATACATACTGTCCAATTTTCA
TTAAATTTTGTCTTAC

45

SEQ ID NO: 353

>3230 BLOOD 480496.45 L38616 g603444 Human brain and reproductive organ-expressed protein (BRE) gene, complete cds. 0

GCGCGCTCGGGTACCTGTACCCACGTAAGTCGCCGGTTACCGATCGGACTAAGTT
CCAGAAGCAAGAGATAAAGTAATAATGGGTACTGTGGGGAAAAACACAGAAGA
ACAATTCGGTAATATAGTGGTGATTTACAAGTCAAGTTAAAATGTCCCCAGAAGT
GGCCTTGAACCGAATATCTCCAATGCTCTCCCCTTTCATATCTAGCGTGGTCCGG
5 AATGGAAAAGTGGGACTGGATGCTACAACTGTTTGAGGATAACTGACTTAAAA
TCTGGCTGCACATCATTGACTCCTGGGCCCAACTGTGACCGATTAACTGCACA
TACCATATGCTGGAGAGACATTAAAGTGGGATATCATTTTCAATGCCCAATACCC
AGAAGTGCCTCCCGATTTTATCTTTGGAGAAGATGCTGAATTCCTGCCAGACCCC
TCAGCTTTGCAGAATCTTGCCTCCTGGAATCCTTCAAATCCTGAATGTCTCTTACT
10 TGTGGTGAAGGAAGTGTGCAACAATATACCAATTCCAATGTAGCCGCCTCCGG
GAGAGCTCCCGCCTCATGTTTGAATACCAGACATTACTGGAGGAGCCACAGTATG
GAGAGAACATGGAAATTTATGCTGGGAAAAAACAACCTGGACTGGTGAATTTT
CAGCTCGTTTCCTTTTGAAGCTGCCCGTAGATTTTCAAGCAATATCCCCACATACCTT
CTCAAGGATGTAAATGAAGACCCTGGAGAAGATGTGGCCCTCCTCTCTGTAGTT
15 TTGAGGACACTGAAGCCACCCAGGTGTACCCCAAGCTGTACTTGTACCTCGAAT
TGAGCATGCACTTGGAGGCTCCTCAGCTCTTCATATCCCAGCTTTTCCAGGAGGA
GGATGTCTCATTGATTACGTTTCTCAAGTATGCCACCTGCTCACCAACAAGGTGC
AGTACGTGATTCAAGGGTATCACAAAAGAAGAGAGTATATTGCTGCTTTTCTCAG
TCACTTTGGCACAGGTGTCTGGAATATGATGCAGAAGGCTTTACAAAACCTCACT
20 CTGCTGCTGATGTGGAAAGATTTTGTCTTGTACACATTGACCTGCCTCTGTT
TTTCCCTCGAGACCAGCCAACCTCTCACATTTAGTCCGTTTATCACTTTACCAACA
GTGGACAGCTTTACTCCCAGGCCCAAAAAAATTATCCGTACAGCCCCAGATGGG
ATGGAAATGAAATGGCCAAAAGAGCAAAAGGCTTATTTCAAACCTTTGTCCCTC
AGTTCCAGGAGGCAGCATTGCGCAATGGAAAGCTCTAGGAAACACCAGTCTTGA
25 GAGGTGGCCAGCCAGACTGCCTGTCCACATGCGTGTACGACATACAGCCGCTTC
CTGGAAGCCGCCTGGAATGTCTTCACGGCAGCGTTTTGCTCACACAGCAGCTTTT
GCACGCCCCAGGCAGCCCCGACTGCTGAAATCCAACCTTGAGCTGGCTGGTGGTCC
CTGGATCCTAGAGCCCTTCACTTCGGGTTACTCCCTCTTTCTTGCCTCTATTTCTTA
GTTGGAAGAAATAAACTCACAAATTATGGTGCAGTAATTTTCCGGGGAAAGTAA
30 AGCCTCAGGAATGCCACGCCTTTCTTCAAAGCCTTTGTCTCTGAGACCTCTTAA
GTTCTAAGATTAAATGCCCTCGCTGTTCTTCCTCTG

SEQ ID NO: 354

>3242 BLOOD 201279.14 U37408 g3702074 Human phosphoprotein CtBP mRNA,

35 complete cds. 0

TGCACCCTGAGCTCAATGGGGCTGCCTATAGGTACCCGCNCCACGCCCTTCTCC
TGGCCAAACCGTCAAGCCCGAGGCGGATAGAGACCACGCCAGTGACCAGTTGTA
GCCCCGGGAGGAGCTCTCCAGCCTCGGCGCCTGGGCAGAGGGCCCGGAAACCCTC
GGACCAGAGTGTGTGGAGGAGGCATCTGTGTGGTGGCCCTGGCACTGCAGAGAC
40 TGGTCCGGGCTGTCAGGAGGCGGGAGGGGGCAGCGCTGGGCCTCGTGTGCTTG
TCGTCTCGTCCGTCTGTGGGCGCTCTGCCCTGTGTCTTCGCGTTCTCGTTAAGCA
GAAGAAGTCAGTAGTTATTCTCCCATGAACGTTCTTGTCTGTGTACAGTTTTTAGA
ACATTACAAAGGATCTGTTTGCTTAGCTGTCAACAAAAAGAAAACCTGAAGGAG
CATTTGGAAGTCAATTTGAGGNNNNNNNNNNNNNNNNNNNNNNTTGTATGTT
45 GGAACGTGCCCCAGAATGAGGCAGTTGGCAAACCTTCTCAGGACAATGAATCCTC
CCGTTTTTCTTTTATGCCACACAGTGCATTGTTTTTCTACCTGCTTGTCTTATTT
TAGAATAATTTAGAAAAACAAAACAAAGGCTGTTTTTCTAATTTTGGCAGAACC
CCCC

SEQ ID NO: 355

>3284 BLOOD Hs.6453 gnl|UG|Hs#S377401 Human inositol 1,3,4-trisphosphate 5/6-kinase mRNA, complete cds /cds=(118,1362) /gb=U51336 /gi=1322037 /ug=Hs.6453 /len=3049

5 CGCGAGGACCAGGCCGAGGAGGAAGTGGCGGCGGCGGCGGCGGGCTCCCCGCC
CGAGGAGGAAGATGCAGACCTTTCTGAAAGGGAAGAGAGTTGGCTACTGGCTGA
GCGAGAAGAAAATCAAGAAGCTGAATTTCCAGGCTTTCGCCGAGCTGTGCAGGA
AGCGAGGGATGGAGGTTGTGCAGCTGAACCTTAGCCGGCCGATCGAGGAGCAGG
10 GCCCCCTGGACGTCATCATCCACAAGCTGACTGACGTCATCCTTGAAGCCGACCA
GAATGATAGCCAGTCCCTGGAGCTGGTGCACAGGTTCCAGGAGTACATCGATGC
CCACCCTGAGACCATCGTCCTGGACCCGCTCCCTGCCATCAGAACCTGCTTGAC
CGCTCCAAGTCCTATGAGCTCATCCGGAAGATTGAGGCCTACATGGAAGACGAC
AGGATCTGCTCGCCACCCTTCATGGAGCTCACGAGCCTGTGCGGGGATGACACCA
TGCGGCTGCTGGAGAAGAACGGCTTGACTTTCCCATTCATTTGCAAAACCAGAGT
15 GGCTCATGGCACCAACTCTCACGAGATGGCTATCGTGTTCACCAGGAGGGCCTG
AACGCCATCCAGCCACCCTGCGTGGTCCAGAATTTTCATCAACCACAACGCCGTCC
TGTAACAAGGTGTTTCGTGGTTGGCGAGTCTACACCGTGGTCCAGAGGCCCTCACT
CAAGAACTTCTCCGCAGGCACATCAGACCGTGAGTCCATCTTCTTCAACAGCCAC
AACGTGTCAAAGCCGGAGTCGTCATCGGTCCTGACGGAGCTGGACAAGATCGAG
20 GCGTGTTTCGAGCGGCCGAGCGACGAGGTCATCCGGGAGCTCTCCCGGGCCCTG
CGGCAGGCACTGGGCGTGTCACTCTTCGGCATCGACATCATCAACAACCAGA
CAGGGCAGCACGCCGTCATTGACATCAATGCCCTTCCAGGCTACGAGGGCGTGA
GCGAGTTCTTCACAGACCTCTGGAACCACATCGCCACTGTCCTGCAGGGCCAGAG
CACAGCCATGGCAGCCACAGGGGACGTGGCCCTGCTGAGGCACAGCAAGCTTCT
25 GGCCGAGCCGCGGGCGGCCTGGTGGGCGAGCGGACATGCAACGCCAGCCCCGG
CTGCTGCGGCAGCATGATGGGCCAGGACGCGCCCTGGAAAGCTGAGGCCGACGC
GGGCGGCACCGCCAAGCTGCCGCACCAGAGACTCGGCTGCAACGCCGGCGTGTCT
TCCCAGCTTCCAGCAGCATTGTGTGGCCTCCCTGGCCACCAAGGCCTCCTCCAG
TAGCCACGGAGCCGGGACCCAGAGGGCAGCGCAGGCGCAGGAGCACACCCGCT
30 GGGCCAGCAGCTCCCAACGGCGATGCTACTACTAAGAATCCCCAGTGATCTGATT
CTTCTGTTTTTTAATTTTTAACCTGATTTTCTGATGTCATGATCTAAATGAGGGGT
AGAAGAGAGTACCAGGTGGTCCACCGTTGGGGAGCGGGGCGTCCGCCTGCTCT
CTACTGTGCAGACCTCCTAACTGAGTTTACACACGCTTGTGTTGCAACACTAGGT
CTGGATGGGAGGTGAGGGGGGTGCGTATACTGCCATGCCAGTGTCTGTGCACAT
35 CCTGTCTGTTGTCTCCATGGCCACTGTGGACTGGGACCCTTGAAGCCTGCCCCAT
GTGGGTGTGGGAGGCTGATCAGTGCGTGTGAGAGTGGCTTCCCTTCTGCCTGACT
CCCCACTCCCTGACCTGCCCTTCCCTTGTCTTCTCCTACTGGTCTCCACCAAGG
CTTTGTTAGCCCCCACCCTGCCTGGTGTGCAGCTAACCCCTCCCTCCCCACAGCCA
GAGGAGGCCACAGACCCCTCAGGGAGTTCCGCGCTGGGGTCTGGGCTGTGCTCC
40 CTCATAAAGGGAAGGAAAGGAAGCTGGGCGTCTCCGGGCCCCCAACACACG
TCCCATTAGCCCTGCACAGCGGTCTCCTTCCCTAAGCCAGCACTGCTGCTCCCT
GGAGCCGGGAAGGAGGCTGCCTGGCTGGAGGCCGAGCCGATGGGCCTGTGCTGA
GGATTTGTGCTGTGATTTGGGCAAATCATTCCAGGTCTTTGGGCCTCACCCCCCTC
GTCTCTAGTGGACATTTGAGATCAGAGAGCACCACAGGGCTGGCTTTGTGCCCTA
45 ACCCCTGGGATGCAGCCTGCCTTTCCATAAAGTCACCTAGGTGAGGATAGGCGCG
GGAGCCTCGGCATGACACCATGGAGATCGGGGCCCTCTTCCCAGTGGGTTCACTC
CTTTTCACACCTGCTGGGTCCCTCCTCGCCCAGCAGGCCTGGTCCACCTCTCATTG
CAAGCCCGCAAGCACTGAGCCGAGTAAGGTGCTTAGTGTGAGCCACCCGCCCCC
CATAGCTTCTGCACACCTCAGACTCACCCCATCACCTTGGCAGCAAAGCACTGCT

CTGCCGTCTGACCCCTGATCCAGGCAGCAGCCCCCTCCGCAGAGAAAAGGGTTG
GGGAGAAGCCTCTGCAGTCCTGGAAGATGTGGGGTGCTGGGTGAGAGGCATCAG
CCCCACAAGTATGTTTTTGTGTCTTAAGATAGCAGTTTACTTTGAAAAAGTGAA
AAAGGCTTCCGGGCTGTCTCTGCCCAGTGAGATGGAGGACGCTAGAGAAAGTG
5 CTGAGTGTCCCGAGAGAGGGCCCCCGAGCCAGTGCATGGAGGTCTTCGGCCTGGC
TCAGCTGGGCTGCAGGATGCCCACTTTGAGGAGGGAGGCACAGGGCTTGGGCGA
GGGGCAGAGGCCATCAGAACTGCCCGGCTTTTTTGGAACTGAGGACCCAACAA
CTAACCACGTTTACACGACTTGAGTTTTGAACCCCGATTAATGTCTGTACGTCAC
CTTTCCTAGTTCTGACCCTGAGCCCTGGGGAAACAGGAAAGCGTGGCTGGCCTCTT
10 GCACTGCTTTGTCTCCAAAATAAACTACTGAAATCAAACCGCATTTT

SEQ ID NO: 356

>3325 BLOOD 434815.28 X13916 g34338 Human mRNA for LDL-receptor related protein.

0

15 CAGCGGTGCGAGCTCCAGGCCCATGCACTGAGGAGGCGGAAACAAGGGGAGCC
CCCAGAGCTCCATCAAGCCCCCTCAAAGGCTCCCCTACCCGGTCCACGCCCCC
ACCCCCCTCCCCGCCTCCTCCCAATTGTGCATTTTTGCAGCCGGAGGCGGCTCC
GAGATGGGGCTGTGAGCTTCGCCCCGGGGAGGGGGAAAGAGCAGCGAGAGTGAA
GCGGGGGGTGGGTGAAGGGTTTGGATTTGCGGGCAGGGGGCGCACCCCCGTCAG
20 CAGGCCCTCCCCAAGGGGCTCGGAACTCTACCTCTTACCCACGCCCTGGTGCG
CTTTGCCGAAGGAAAGAATAAGAACAGAGAAGGAGGAGGGGGAAAGGAGGAAA
AGGGGGACCCCCCAACTGGGGGGGGTGAAGGAGAGAAGTAGCAGGACCAGAGG
GGAAGGGGCTGCTGCTTGATCAGCCACACCATGCTGACCCCGCCGTTGCTCCT
GCTGCTGCCCTGCTGTCAGCTCTGGTCGCGGCGGCTATCGACGCCCTAAGACT
25 TGCAGCCCCAAGCAGTTTGCCTGCAGAGATCAAATAACCTGTATCTCAAAGGGCT
GGCGGTGCGACGGTGAGAGGGACTGCCCAGACGGATCTGACGAGGCCCCCTGAGA
TTTGTCCACAGAGTAAGGCCCAGCGATGCCAGCCAAACGAGCATAACTGCCTGG
GTACTGAGCTGTGTGTTCCCATGTCCCGCCTCTGCAATGGGGTCCAGGACTGCAT
GGACGGCTCAGATGAGGGGGCCCCACTGCCGAGAGCTCCAAGGCAACTGCTCTCG
30 CCTGGGCTGCCAGCACCATTTGTGTCCCCACACTCGATGGGCCCACCTGCTACTGC
AACAGCAGCTTTCAGCTTCAGGCAGATGGCAAGACCTGCAAAGATTTTGATGAG
TGCTCAGTGTACGGCACCTGCAGCCAGCTATGCACCAACACAGACGGCTCCTTCA
TATGTGGCTGTGTTGAAGGATACCTCCTGCAGCCGGATAACCGCTCCTGCAAGGC
CAAGAACGAGCCAGTAGACCGGCCCCCTGTGCTGTTGATAGCCAACTCCCAGAA
35 CATCTTGGCCACGTACCTGAGTGGGGCCCAGGTGTCTACCATCACACCTACGAGC
ACGCGGCAGACCACAGCCATGGACTTCAGCTATGCCAACGAGACCGTATGCTGG
GTGCATGTTGGGGACAGTGCTGCTCAGACGCAGCTCAAGTGTGCCCGCATGCCTG
GCCTAAAGGGCTTCGTGGATGAGCACACCATCAACATCTCCCTCAGTCTGCACCA
CGTGGAACAGATGGCCATCGACTGGCTGACAGGCAACTTCTACTTTGTGGATGAC
40 ATCGATGATAGGATCTTTGTCTGCAACAGAAATGGGGACACATGTGTCACATTGC
TAGACCTGGAACCTACAACCCCAAGGGCATTGCCCTGGACCCTGCCATGGGGA
AGGTGTTTTTCACTGACTATGGGCAGATCCCAAAGGTGGAACGCTGTGACATGGA
TGGGCAGAACCGCACCAAGCTCGTCGACAGCAAGATTGTGTTTCCTCATGGCATC
ACGCTGGACCTGGTCAGCCGCCTTGTCTACTGGGCAGATGCCTATCTGGACTATA
45 TTGAAGTGGTGGACTATGAGGGCAAGGGCCGCCAGACCATCATCCAGGGCATCC
TGATTGAGCACCTGTACGGCCTGACTGTGTTTGAGAATTATCTCTATGCCACCAA
CTCGGACAATGCCAATGCCCAGCAGAAGACGAGTGTGATCCGTGTGAACCGCTT
TAACAGCACCGAGTACCAGGTTGTACCCCGGTGGACAAGGGTGGTGCCCTCCA
CATCTACCACAGAGGCGTCAGCCCCGAGTGAGGAGCCATGCCTGTGAAAACGA

CCAGTATGGGAAGCCGGGTGGCTGCTCTGACATCTGCCTGCTGGCCAACAGCCAC
AAGGCGCGGACCTGCCGCTGCCGTTCCGGCTTCAGCCTGGGCAGTGACGGGAAG
TCATGCAAGAAGCCGGAGCATGAGCTGTTCCCTCGTGTATGGCAAGGGCCGGCCA
GGCATCATCCGGGGCATGGATATGGGGGCCAAGGTCCCGGATGAGCACATGATC
5 CCCATTGAAAACCTCATGAACCCCCGAGCCCTGGACTTCCACGCTGAGACCGGCT
TCATCTACTTTGCCGACACCACCAGCTACCTCATTGGCCGCCAGAAGATTGATGG
CACTGAGCGGGAGACCATCCTGAAGGACGGCATCCACAATGTGGAGGGTGTGGC
CGTGGACTGGATGGGAGACAATCTGTACTGGACGGACGATGGGGCCAAAAAGAC
AATCAGCGTGGCCAGGCTGGAGAAAGCTGCTCAGACCCGCAAGACTTTAATCGA
10 GGGCAAAATGACACACCCAGGGCTATTGTGGTGGATCCACTCAATGGGTGGAT
GTACTGGACAGACTGGGAGGAGGACCCCAAGGACAGTCGGCGTGGGCGGCTGG
AGAGGGCGTGGATGGATGGCTCACACCGAGACATCTTTGTACCTCCAAGACAG
TGCTTTGGCCCAATGGGCTAAGCCTGGACATCCCGGCTGGGCGCCTCTACTGGGT
GGATGCCTTCTACGACCGCATCGAGACGATACTGCTCAATGGCACAGACCGGAA
15 GATTGTGTATGAAGGTCCTGAGCTGAACCACGCCTTTGGCCTGTGTACCATGGC
AACTACCTCTTCTGGACTGAGTATCGGAGTGGCAGTGTCTACCGCTTGGAACGGG
GTGTAGGAGGGCGCACCCCCCACTGTGACCCTTCTGCGCAGTGAGCGGCCCCCAT
CTTTGAGATCCGAATGTATGATGCCCAGCAGCAGCAAGTTGGCACCAACAAATG
CCGGGTGAACAATGGCGGCTGCAGCAGCCTGTGCTTGGCCACCCCTGGGAGCCG
20 CCAGTGCGCCTGTGCTGAGGACCAGGTGTTGGACGCAGACGGCGTCACTTGCTTG
GCGAACCCATCCTACGTGCCTCCACCCCAAGTGCCAGCCAGGCGAGTTTGCTGTG
GCAACAGCCGCTGCATCCAGGAGCGCTGGAAAGTGTGACGGAGACAACGATTGCC
TGGACAACAGTGATGAGGCCCCAGCCCTGTGCCATCAGCACACCTGCCCTCGGA
CCGATTCAAGTGCGAGAACAACCGGTGCATCCCCAACCGCTGGCTCTGCGACGG
25 GGACAATGACTGTGGGAACAGTGAAGATGAGTCCAATGCCACTTGTTCAGCCCG
CACCTGCCCCCCCCAACCAGTTCTCCTGTGCCAGTGGCCGCTGCATCCCCATCTCCT
GGACGTGTGATCTGGATGACGACTGTGGGGACCGCTCTGATGAGTCTGCTTCGTG
TGCTATCCACCTGCTTCCCCCTGACTCAGTTTACCTGCAACAATGGCAGATGT
ATCAACATCAACTGGAGATGCGACAATGACAATGACTGTGGGGACAACAGTGAC
30 GAAGCCGGCTGCAGCCACTCCTGTTCTAGCACCCAGTTCAAGTGCAACAGCGGG
CGTTGCATCCCCGAGCACTGGACCTGCGATGGGGACAATGACTGCGGAGACTAC
AGTGATGAGACACACGCCAACTGCACCAACCAGGCCACGAGGCCCCCTGGTGGC
TGCCACACTGATGAGTTCCAGTGCCGGCTGGATGGACTATGCATCCCCCTGCGGT
GGCGCTGCGATGGGGACACTGACTGCATGGACTCCAGCGATGAGAAGAGCTGTG
35 AGGGAGTGACCCACGTCTGCGATCCCAGTGTCAAGTTTGGCTGCAAGGACTCAG
CTCGGTGCATCAGCAAAGCGTGGGTGTGTGATGGCGACAATGACTGTGAGGATA
ACTCGGACGAGGAGAACTGCGAGTCCCTGGCCTGCAGGCCACCCTCGCACCCCTT
GTGCCAACAAACACCTCAGTCTGCCTGCCCCCTGACAAGCTGTGTGATGGCAACGA
CGACTGTGGCGACGGCTCAGATGAGGGCGAGCTCTGCGACCAGTGCTCTCTGAA
40 TAACGGTGGCTGCAGCCACAACCTGCTCAGTGGCACCTGGCGAAGGCATTGTGTGT
TCCTGCCCTCTGGGCATGGAGCTGGGGCCCGACAACCACACCTGCCAGATCCAG
AGCTACTGTGCCAAGCATCTCAAATGCAGCCAAAAGTGCGACCAGAACAAGTTC
AGCGTGAAGTGCTCCTGCTACGAGGGCTGGGTCTGGAACCTGACGGCGAGAGC
TGCCGCGACCTGGACCCCTTCAAGCCGTTTCATCATTTTCTCCAACCGCCATGAAA
45 TCCGGCGCATCGATCTTCACAAAGGAGACTACAGCGTCCTGGTGCCCGGCTGCG
CAACACCATCGCCCTGGACTTCCACCTCAGCCAGAGCGCCCTCTACTGGACCGAC
GTGGTGGAGGACAAGATCTACCGCGGGAAGCTGCTGGACAACGGAGCCCTGACT
AGTTTCGAGGTGGTGATTCAGTATGGCCTGGCCACACCCGAGGGCCTGGCTGTAG
ACTGGATTGCAGGCAACATCTACTGGGTGGAGAGTAACCTGGATCAGATCGAGG

TGGCCAAGCTGGATGGGACCCTCCGGACCACCCTGCTGGCCGGTGACATTGAGC
ACCCAAGGGCAATCGCACTGGATCCCCGGGATGGGATCCTGTTTTGGACAGACT
GGGATGCCAGCCTGCCCCGCATTGAGGCAGCCTCCATGAGTGGGGCTGGGCGCC
GCACCGTGCACCGGGAGACCGGCTCTGGGGGCTGGCCCAACGGGCTCACCGTGG
5 ACTACCTGGAGAAGCGCATCCTTTGGATTGACGCCAGGTCAGATGCCATTTACTC
AGCCCGTTACGACGGCTCTGGCCACATGGAGGTGCTTCGGGGACACGAGTTCCTG
TCGCACCCGTTTGCAGTGACGCTGTACGGGGGGGAGGTCTACTGGACTGACTGGC
GAACAAACACACTGGCTAAGGCCAACAAGTGGACCGGCCACAATGTCACCGTGG
TACAGAGGACCAACACCCAGCCCTTTGACCTGCAGGTGTACCACCCCTCCCGCCA
10 GCCCATGGCTCCCAATCCCTGTGAGGCCAATGGGGGGCCAGGGCCCCTGCTCCAC
CTGTGTCTCATCAACTACAACCGGACCGTGTCTGCGCCTGCCCCACCTCATGA
AGCTCCACAAGGACAACACCACCTGCTATGAGTTTAAGAAGTTCCTGCTGTACGC
ACGTCAGATGGAGATCCGAGGTGTGGACCTGGATGCTCCCTACTACAACTACATC
ATCTCCTTCACGGTGCCCGACATCGACAACGTCACAGTGCTAGACTACGATGCCC
15 GCGAGCAGCGTGTGTACTGGTCTGACGTGCGGACACAGGCCATCAAGCGGGCCT
TCATCAACGGCACAGGCGTGGAGACAGTCGTCTCTGCAGACTTGCCAAATGCCC
ACGGGCTGGCTGTGGACTGGGTCTCCCGAAACCTGTTCTGGACAAGCTATGACAC
CAATAAGAAGCAGATCAATGTGGCCCGGCTGGATGGCTCCTTCAAGAACGCAGT
GGTGCAGGGCCTGGAGCAGCCCCATGGCCTTGTCGTCCACCCTCTGCGTGGGAAG
20 CTCTACTGGACCGATGGTGACAACATCAGCATGGCCAACATGGCATGGCAGCAA
TCGCACCCCTGCTCTTCAGTGGCCAGAAGGGCCCCGTGGGCCTGGCTATTGACTTC
CCTGAAAGCAAACCTCTACTGGATCAGCTCCGGGAACCATAACCATCAACCGCTGC
AACCTGGATGGGAGTGGGCTGGAGGTGATCGATGCCATGCGGAGGCCAGCTGGGC
AAGGCCACCGCCCTGGCCATCATGGGGGACAAGCTGTGGTGGGCTGATCAGGTG
25 TCGGAAAAGATGGGCACATGCAGCAAGGCTGACGGCTCGGGCTCCGTGGTCCTT
CGGAACAGCACCACCCTGGTGATGCACATGAAGGTCTATGACGAGAGCATCCAG
CTGGACCATAAGGGCACCAACCCCTGCAGTGTCAACAACGGTGACTGCTCCCAG
CTCTGCCTGCCCACGTCAGAGACGACCCGCTCCTGCATGTGCACAGCCGGCTATA
GCCTCCGGAGTGGCCAGCAGGCCTGCGAGGGCGTAGGTTCCCTTTCTCCTGTACTC
30 TGTGCATGAGGGAATCAGGGGAATTCCTTGGATCCCAATGACAAGTCAGATGC
CCTGGTCCCAGTGTCCGGGACCTCGCTGGCTGTCGGCATCGACTTCCACGCTGAA
AATGACACCATCTACTGGGTGGACATGGGCCTGAGCACGATCAGCCGGGCCAAG
CGGGACCAGACGTGGCGTGAAGACGTGGTGACCAATGGCATTGGCCGTGTGGAG
GGCATTGCAGTGGACTGGATCGCAGGCAACATCTACTGGACAGACCAGGGCTTT
35 GATGTCATCGAGGTCGCCCCGGCTCAATGGCTCCTTCCGCTACGTGGTGATCTCCC
AGGGTCTAGACAAGCCCCGGGCCATCACCGTCCACCCGGAGAAAGGGTACTTGT
TCTGGACTGAGTGGGGTCAGTATCCGCGTATTGAGCGGTCTCGGCTAGATGGCAC
GGAGCGTGTGGTGCTGGTCAACGTCAGCATCAGCTGGCCCAACGGCATCTCAGT
GGACTACCAGGATGGGAAGCTGTACTGGTGGCATGCACGGACAGACAAGATTGA
40 ACGGATCGACCTGGAGACAGGTGAGAACCGCGAGGTGGTTCTGTCCAGCAACAA
CATGGACATGTTTTCAGTGTCTGTGTTTGAGGATTTTCATCTACTGGAGTGACAGG
ACTCATGCCAACGGCTCTATCAAGCGCGGGAGCAAAGACAATGCCACAGACTCC
GTGCCCCTGCGAACCGGCATCGGCGTCCAGCTTAAAGACATCAAAGTCTTCAACC
GGGACCGGCAGAAAGGCACCAACGTGTGCGCGGTGGCCAATGGCGGGTGCCAGC
45 AGCTGTGCCTGTACCGGGGGCCGTGGGCAGCGGGCCTGCGCCTGTGCCCACGGGA
TGCTGGCTGAAGACGGAGCATCGTGCCGCGAGTATGCCGGCTACCTGCTCTACTC
AGAGCGCACCATTTCTCAAGAGTATCCACCTGTCGGATGAGCGCAACCTCAATGC
GCCCCTGCAGCCCTTCGAGGACCCTGAGCACATGAAGAACGTTCATCGCCCTGGC
CTTTGACTACCGGGCAGGCACCTCTCCGGGCACCCCCAATCGCATCTTCTTCAGC

GACATCCACTTTGGGAACATCCAACAGATCAACGACGATGGCTCCAGGAGGATC
ACCATTTGTGGAAAACGTGGGCTCCGTGGAAGGCCTGGCCTATCACCGTGGCTGG
GACACTCTCTATTGGACAAGCTACACGACATCCACCATCACGCGCCACACAGTGG
ACCAGACCCGCCCAGGGGCCTTCGAGCGTGAGACCGTCATCACTATGTCTGGAG
5 ATGACCACCCACGGGCCTTCGTTTTGGACGAGTGCCAGAACCTCATGTTCTGGAC
CAACTGGAATGAGCAGCATCCCAGCATCATGCGGGCGGCGCTCTCGGGAGCCAA
TGTCTTGACCCTTATCGAGAAGGACATCCGTACCCCAATGGCCTGGCCATCGAC
CACCGTGCCGAGAAGCTCTACTTCTCTGACGCCACCCTGGACAAGATCGAGCGGT
10 GCGAGTATGACGGCTCCCACCGCTATGTGATCCTAAAGTCAGAGCCTGTCCACCC
CTTCGGGCTGGCCGTGTATGGGGAGCACATTTTCTGGACTGACTGGGTGCGGCGG
GCAGTGCAGCGGGCCAACAAGCACGTGGGCAGCAACATGAAGCTGCTGCGCGTG
GACATCCCCCAGCAGCCCATGGGCATCATCGCCGTGGCCAACGACACCAACAGC
TGTGAACTCTCTCCATGCCGAATCAACAACGGTGGCTGCCAGGACCTGTGTCTGC
TCACTCACCAGGGCCATGTCAACTGCTCATGCCGAGGGGGCCGAATCCTCCAGG
15 ATGACCTCACCTGCCGAGCGGTGAATTCTCTTGCCGAGCACAAGATGAGTTTGA
GTGTGCCAATGGCGAGTGCATCAACTTCAGCCTGACCTGCGACGGCGTCCCCCAC
TGCAAGGACAAGTCCGATGAGAAGCCATCCTACTGCAACTCCCGCCGCTGCAAG
AAGACTTTCCGGCAGTGCAGCAATGGGCGCTGTGTGTCCAACATGCTGTGGTGCA
ACGGGGCCGACGACTGTGGGGATGGCTCTGACGAGATCCCTTGCAACAAGACAG
20 CCTGTGGTGTGGGCGAGTTCCGCTGCCGGGACGGGACCTGCATCGGGAACCTCA
GCCGCTGCAACCAGTTTGTGGATTGTGAGGACGCCTCAGATGAGATGAACTGCA
GTGCCACCGACTGCAGCAGCTACTTCCGCCTGGGCGTGAAGGGCGTGTCTCTTCCA
GCGCTGCGAGCGGACCTCCTCTGCTACGCAACCCAGCTGGGTGTGTGATGGCGCC
AATGACTGTGGGGACTACAGTGATGAGCGCGACTGCCCAGGTGTGAAACGCCCG
25 AGATGCCCTCTGAATTACTTCGCCTGCCCTAGTGGGCGCTGCATCCCCATGAGCT
GGACGTGTGACAAAGAGGATGACTGTGAACATGGCGAGGACGAGACCCACTGCA
ACAAGTTCTGCTCAGAGGCCCAGTTTGAGTGCCAGAACCATCGCTGCATCTCCAA
GCAGTGGCTGTGTGACGGCAGCGATGACTGTGGGGATGGCTCAGACGAGGCTGC
TCACTGTGAAGGCAAGACGTGCGGCCCTCCTCCTTCTCCTGCCCTGGCACCCAC
30 GTGTGCGTCCCCGAGCGCTGGCTCTGTGACGGTGACAAAGACTGTGCTGATGGTG
CAGACGAGAGCATCGCAGCTGGTTGCTTGTACAACAGCACTTGTGACGACCGTG
AGTTCATGTGCCAGAACCGCCAGTGCATCCCCAAGCACTTCGTGTGTGACCACGA
CCGTGACTGTGCAGATGGCTCTGATGAGTCCCCCGAGTGTGAGTACCCGACCTGC
GGCCCCAGTGAGTTCCGCTGTGCCAATGGGCGCTGTCTGAGCTCCCGCCAGTGGG
35 AGTGTGATGGCGAGAATGACTGCCACGACCAGAGTGACGAGGCTCCCAAGAACC
CACACTGCACCAGCCCAGAGCACAAGTGCAATGCCTCGTCACAGTTCCTGTGCAG
CAGTGGGCGCTGTGTGGCTGAGGCACTGCTCTGCAACGGCCAGGATGACTGTGG
CGACAGCTCGGACGAGCGTGGCTGCCACATCAATGAGTGTCTCAGCCGCAAGCT
CAGTGGCTGCAGCCAGGACTGTGAGGACCTCAAGATCGGCTTCAAGTGCCGCTG
40 TCGCCCTGGCTTCCGGCTGAAGGACGACGGCCGGACGTGTGCTGATGTGGACGA
GTGCAGCACCACCTTCCCCTGCAGCCAGCGCTGCATCAACACCCATGGCAGCTAT
AAGTGTCTGTGTGTGGAGGGCTATGCACCCCGCGGCGGCGACCCCCACAGCTGC
AAGGCTGTGACTGACGAGGAACCGTTTCTGATCTTCGCCAACCGGTACTACCTGC
GCAAGCTCAACCTGGACGGGTCCAACCTACACGTTACTTAAGCAGGGCCTGAACA
45 ACGCCGTTGCCTTGGATTTTGAATACCGAGAGCAGATGATCTACTGGACAGATGT
GACCACCCAGGGCAGCATGATCCGAAGGATGCACCTTAACGGGAGCAATGTGCA
GGTCCTACACCGTACAGGCCTCAGCAACCCCGATGGGCTGGCTGTGGACTGGGT
GGGTGGCAACCTGTACTGGTGGGACAAAGGCCGGGACACCATCGAGGTGTCCAA
GCTCAATGGGGCCTATCGGACGGTGTGGTCAGCTCTGGCCTCCGTGAGCCAGG

GCTCTGGTGGTGGATGTGCAGAATGGGTACCTGTACTGGACAGACTGGGGTGAC
CATTCATGATCGGCCGCATCGGCATGGATGGGTCCAGCCGCAGCGTCATCGTGG
ACACCAAGATCACATGGCCCAATGGCCTGACGCTGGACTATGTCACTGAGCGCA
TCTACTGGGCCGACGCCCCGCGAGGACTACATTGAATTTGCCAGCCTGGATGGCTC
5 CAATCGCCACGTTGTGCTGAGCCAGGACATCCCGCACATCTTTGCACTGACCCTG
TTTGAGGACTACGTCTACTGGACCGACTGGGAAACAAAGTCCATTAACCGAGCC
CACAAGACCACGGGCACCAACAAAACGCTCCTCATCAGCACGCTGCACCGGCCC
ATGGACCTGCATGTCTTCCATGCCCTGCGCCAGCCAGACGTGCCCAATCACCCCT
GCAAGGTCAACAATGGTGGCTGCAGCAACCTGTGCCTGCTGTCCCCCGGGGGAG
10 GGCACAAATGTGCCTGCCCCACCAACTTCTACCTGGGCAGCGATGGGCGCACCTG
TGTGTCCAATGCACGGCTAGCCAGTTTGTATGCAAGAACGACAAGTGCATCCCC
TTCTGGTGGAAAGTGTGACACCGAGGACGACTGCGGGGACCACTCAGACGAGCCC
CCGGACTGCCCTGAGTTCAAGTGCCGGCCCCGGACAGTTCCAGTGCTCCACAGGTA
TCTGCACAAACCCTGCCTTCATCTGCGATGGCGACAATGACTGCCAGGACAACAG
15 TGACGAGGCCAACTGTGACATCCACGTCTGCTTGCCCAAGTCAGTTCAAATGCACC
AACACCAACCGCTGTATTCCCGGCATCTTCCGCTGCAATGGGCAGGACAACCTGCG
GAGATGGGGAGGATGAGAGGGACTGCCCGAGGTGACCTGCGCCCCCAACCAGT
TCCAGTGCTCCATTACCAAACGGTGCATCCCCCGGGTCTGGGTCTGCGACCGGGA
CAATGACTGTGTGGATGGCAGTGATGAGCCCGCCAACCTGCACCCAGATGACCTG
20 TGGTGTGGACGAGTTCCGCTGCAAGGATTCGGGCCGCTGCATCCCAGCGCGTTGG
AAGTGTGACGGAGAGGATGACTGTGGGGATGGCTCGGATGAGCCCAAGGAAGA
GTGTGATGAACGCACCTGTGAGCCATACCAGTTCGCTGCAAGAACAACCGCTG
CGTGCCCCGGCCGCTGGCAGTGCGACTACGACAACGATTGCGGTGACAACTCCGA
TGAAGAGAGCTGCACCCCTCGGCCCTGCTCCGAGAGTGAGTTCTCCTGTGCCAAC
25 GGCCGCTGCATCGCGGGGCGCTGGAAATGCGATGGAGACCACGACTGCGCGGAC
GGCTCGGACGAGAAAGACTGCACCCCCCGCTGTGACATGGACCAGTTCCAGTGC
AAGAGCGGCCACTGCATCCCCCTGCGCTGGCGCTGTGACGCAGACGCCGACTGC
ATGGACGGCAGCGACGAGGAGGCTGCGGCACTGGCGTGCGGACCTGCCCCCTG
GACGAGTTCCAGTGCAACAACACCTTGTGCAAGCCGCTGGCCTGGAAGTGCGAT
30 GGCAGGATGACTGTGGGGACAACCTCAGATGAGAACCCCGAGGAGTGTGCCCGG
TTCGTGTGCCCTCCCAACCGGCCCTTCCGTTGCAAGAATGACCGCGTCTGTCTGT
GGATCGGGCGCCAATGCGATGGCACGGACAACCTGTGGGGATGGGACTGATGAAG
AGGACTGTGAGCCCCCACAGCCACACCACTGCAAAGACAAGAAGGAGT
TTCTGTGCCGAACAGCGCTGCCTCTCCTCCTCCCTGCGCTGCAACATGTTGAT
35 GACTGCGGGGACGGCTCTGACGAGGAGGACTGCAGCATCGACCCCAAGCTGACC
AGCTGCGCCACCAATGCCAGCATCTGTGGGGACGAGGCACGCTGCGTGCGCACC
GAGAAAGCGGCCTACTGTGCCTGCCGCTCGGGCTTCCACACCGTGCCCGGCCAGC
CCGGATGCCAAGACATCAACGAGTGCTGCGCTTCGGCACCTGCTCCCAGCTCTG
CAACAACACCAAGGGCGGCCACCTCTGCAGCTGCGCTCGGAACCTTCATGAAGAC
40 GCACAACACCTGCAAGGCCGAAGGCTCTGAGTACCAGGTCTGTACATCGCTGA
TGACAATGAGATCCGCAGCCTGTTCCCCGGCCACCCCATTCGGCTTACGAGCAG
GCATTCCAGGGTGACGAGAGTGTCCGCATTGATGCTATGGATGTCCATGTCAAGG
CTGGCCGTGTCTATTGGACCAACTGGCACACGGGCACCATCTCCTACCGCAGCCT
GCCACCTGCTGCGCCTCCTACCACTTCCAACCGCCACCGGCGACAGATTGACCGG
45 GGTGTCACCCACCTCAACATTTAGGGCTGAAGATGCCAGAGGCATCGCCATCG
ACTGGGTGGCCGAAACGTGTACTGGACCGACTCGGGCCGAGATGTGATTGAGG
TGGCGCAGATGAAGGGCGAGAACCGCAAGACGCTCATCTCGGGCATGATTGACG
AGCCCCACGCCATTGTGGTGGACCCACTGAGGGGGACCATGTACTGGTCAGACT
GGGGCAACCACCCCAAGATTGAGACGGCAGCGATGGATGGGACGCTTCGGGAGA

CACTGGTGCAGGACAACATTCAGTGGCCCACAGGCCTGGCCGTGGATTATCACA
 ATGAGCGGCTGTACTGGGCAGACGCCAAGCTTTCAGTCATCGGCAGCATCCGGCT
 CAATGGCACGGACCCCATTTGTGGCTGCTGACAGCAAACGAGGCCTAAGTCACCC
 CTTTCAGCATCGACGTCTTTGAGGATTACATCTATGGTGTACCTACATCAATAAT
 5 CGTGTCTTCAAGATCCATAAGTTTGGCCACAGCCCCTTGGTCAACCTGACAGGGG
 GCCTGAGCCACGCCTCTGACGTGGTCCTTTACCATCAGCACAAGCAGCCCGAAGT
 GACCAACCCATGTGACCGCAAGAAATGCGAGTGGCTCTGCCTGCTGAGCCCCAG
 TGGGCCTGTCTGCACCTGTCCCAATGGGAAGCGGCTGGACAACGGCACATGCGT
 GCCTGTGCCCTCTCCAACGCCCCCCCCAGATGCTCCCCGGCCTGGAACCTGTAAC
 10 CTGCAGTGCTTCAACGGTGGCAGCTGTTTCTCAATGCACGGAGGCAGCCCAAGT
 GCCGCTGCCAACCCCGCTACACGGGTGACAAGTGTGAACTGGACCAGTGCTGGG
 AGCACTGTGCAATGGGGGCACCTGTGCTGCCTCCCCCTCTGGCATGCCACGTG
 CCGGTGCCCCACGGGCTTCACGGGCCCCAAATGCACCCAGCAGGTGTGTGCGGG
 CTA CTGTGCCAACAACAGCACCTGCACTGTCAACCAGGGCAACCAGCCCCAGTG
 15 CCGATGCCTACCCGGCTTCTTGGGCGACCGCTGCCAGTACCGGCAGTGCTCTGGC
 TACTGTGAGAACTTTGGCACATGCCAGATGGCTGCTGATGGCTCCCGACAATGCC
 GCTGCACTGCCTACTTTGAGGGATCGAGGTGTGAGGTGAACAAGTGCAGCCGCT
 GTCTCGAAGGGGCCTGTGTGGTCAACAAGCAGAGTGGGGATGTCACCTGCAACT
 GCACGGATGGCCGGGTGGCCCCCAGCTGTCTGACCTGCGTCGGCCACTGCAGCA
 20 ATGGCGGCTCCTGTACCATGAACAGCAAAATGATGCCTGAGTGCCAGTGCCAC
 CCCACATGACAGGGCCCCCGGTGTGAGGAGCACGTCTTCAGCCAGCAGCAGCCAG
 GACATATAGCCTCCATCCTAATCCCTCTGCTGTTGTGCTGCTGCTGGTTCCTGGTGG
 CCGGAGTGGTATTCTGGTATAAGCGGCGAGTCCAAGGGGCTAAGGGCTTCCAGC
 ACCAACGGATGACCAACGGGGCCATGAACGTGGAGATTGGAAACCCACCTACA
 25 AGATGTACGAAGGCGGAGAGCCTGATGATGTGGGAGGCCTACTGGACGCTGACT
 TTGCCCTGGACCCTGACAAGCCCACTTCACCAACCCCGTGTATGCCACACT
 CTACATGGGGGGCCATGGCAGTCGCCACTCCCTGGCCAGCACGGACGAGAAGCG
 AGAACTCCTGGGCCGGGGCCCTGAGGACGAGATAGGGGACCCCTTGGCATAGGG
 CCCTGCCCCGTGCGACTGCCCCCAGAAAGCCTCCTGCCCCCTGCCGGTGAAGTCC
 30 TTCAGTGAGCCCCTCCCCAGCCAGCCCTTCCCTGGCCCCGCCGGATGTATAAATG
 TAAAAATGAAGGAATTACATTTTATATGTGAGCGAGCAAGCCGGCAAGCGAGCA
 CAGTATTATTTCTCCATCCCCTCCCTGCCTGCTCCTTGGCACCCCCATGCTGCCTT
 CAGGGAGACAGGCAGGGAGGGCTTGGGGCTGCACCTCCTACCCTCCCACCAGAA
 CGCACCCCACTGGGAGAGCTGGTGGTGCAGCCTTCCCCCTCCCTGTATAAGACACT
 35 TTGCCAAGGCTCTCCCCTCTCGCCCCATCCCTGCTTGCCCGCTCCACAGCTTCCT
 GAGGGCTAATTCTGGGAAGGGAGAGTTCTTTGCTGCCCTGTCTGGAAGACGTGG
 CTCTGGGTGAGGTAGGCGGGAAAGGATGGAGTGTTTTAGTTCTTGGGGGAGGCC
 ACCCCAAACCCAGCCCCA ACTCCAGGGGCACCTATGAGATGGCCATGCTCAAC
 CCCCCTCCCAGACAGGCCCTCCCTGTCTCCAGGGCCCCCACCAGGTTCCAGGG
 40 CTGGAGACTTCCTCTGGTAAACATTCCCTCCAGCCTCCCCCTCCCCTGGGGACGCCA
 AGGAGGTGGGCCACACCCAGGAAGGGAAAGCGGGCAGCCCCGTTTTGGGGACGT
 GAACGTTTTAATAATTTTGTCTGAATTCCTTTACAATAAATAACACAGATATTGT
 TATAAATAAATTGTAAAAAAA

45 SEQ ID NO: 357

>3404 BLOOD 235992.7 D87969 g1694636 Human mRNA for CMP-sialic acid transporter, complete cds. 0

CTTTCTTACAAATAAAGTTTATTGCTGAATTTCCCCATTAAACATTATAGAAAACAC
 TGAAATTTACAAATTATTGAGAGCCCAACAGTTAAACATACTTTATTTAAAAAA

GTACAAAAGTGACATTAGAAATTTTTTTGAAGAAATGTGTATCATCTAACAGCAA
 AGAAATATGAACCAGATAATGAATGGCACAAATATAGCACTAAAGGGGTACTCA
 CTAAGGGGGTACTCAGTCACCACCCAGAAATTGTCCGAGTTATGAAATAGATTCA
 TTTTGAGAAGTTACACATTCAGTTTGTGTTATGAACTAGCCTGTCTTGTTTCTGCCT
 5 CTTGTAAGAAAAGAGCTAGGTCTTTATGCTGCTAGGACAAAATACTGTACATGAA
 TTGGAGAATAAGGAGGGGGTTCATCCTTCTCCCCGGTACCGGAACAAGAGAACAGT
 TAGTACAGAAATGGCTTTGGCACTTTAACCCTTAGACATTGTCCCAAACCTTGTT
 ACTTGAGTATTGTAGCCTCACCATGATTTTTTTTAAACACCGTATCATCTCCATACT
 TTTTATTTACAAATTATATATACACACAATAACAATTCCCTTCATTCTAAAACAA
 10 TAGTAGACCCCAAACAGGTCTACATTAAGTTTCTGTATTAGCAGTTCACCTCAGAT
 AGCTTCGTTTGTGTTGTTGTTTCCACATAACCGCACTGATCATGCCATACAGTT
 AATTTTTATTTGTTTATGCTACCTTCTGAGATTGACTTAAGGCTCTAGTTTAATGC
 AAAT

15 SEQ ID NO: 358

>3406 BLOOD 198773.4 U91932 g1923269 Human AP-3 complex sigma3A subunit
 mRNA, complete cds. 0

GGGGCGGGTGGGGAAGGATCGCAGGCGAGATTACGAGGCGAGGCTCGCGCGCC
 CGCCCCCGCCCTGGCCCCCAGTGGCCCCACCCGGTCCGGCCCCGGCACAGCCATGAT
 20 CAAGGCGATCCTAATCTTCAACAACCACGGGAAGCCGCGGCTCTCCAAGTTCTAC
 CAGCCCTACAGTGAAGATACACAACAGCAAATCATCAGGGAGACTTTCATTTG
 GTATCTAAGAGAGATGAAAATGTTTGTAATTTCTAGAAAGGAGGATTATTAATTG
 GAGGATCTGACAACAACTGATTTATAGACATTATGCAACGTTATATTTTGTCTT
 CTGTGTGGATTCTTCAGAAAGTGAAGTTGGCATTTTAGATCTAATTCAAGTATTTG
 25 TGGAAACATTAGACAAATGTTTTGAAAATGTCTGTGAGCTGGATTTGATTTTCCA
 TGTAGACAAGGTTCAACAATATTCTTGCAGAAATGGTGATGGGGGGAATGGTATT
 GGAGACAAATATGAATGAGATTGTTACACAAATTGATGCACAAAATAAGCTGGA
 AAAATCTGAGGCTGGCTTAGCAGGAGCTCCAGCCCGTGCTGTATCAGCTGTAAA
 GAATATGAATCTTCCTGAGATCCCAAGAAATATTAACATTGGTGACATCAGTATA
 30 AAAGTGCCAAACCTGCCCTCTTTTAAATAAAAATGTAAAAAGGCCACTCCCAGGT
 AAAATCCAGGGGGAAGAGTCATCTAAGTTTACCATGCAGTTGTTTACCAAAAAT
 AGAGGAGGAGAGTCTTAACCTTTTGCTCTTGGAATTAAGTCAAGGTACTGTATAGA
 AGTTGTGTAAAATCAGTATGAAAGTTCAATGTTGCTGTTCTTGCTCAGTGATTTTA
 AAGAAATTGAGTAGTTCCTATGTGATTTTTTTTTTTCTTTTCTAACTGCATTCCTG
 35 TGCCACCTACGGCATGCCTCTATGTATTGGCTACTACAGTGTTTTTAAAAGTGTT
 TCAGATATTTCTCTAATTATGTACAACCTAAAATGTTGGTGTTTTGTATGGATCAC
 AAGTGACAGCATTTCCTAATTCCTTCTGCTATATGTCACACAGTTGTTATTTGGAGA
 ACCAAGTATGTATTGCATGAAAACATTATGACTTTTTTCTCTTAGTTTAAATAAAC
 TCCAAGGTAAGTGGACTTCTAAAGCACCTTTCTGTTTGCCTGATATCTACTTTAGC
 40 AATAATTTTTTTTACAACCCTCTGACTCAACAAAGTAAATAAAAAGTATATTTTATC
 ACTAAAAAAAAAAAAAAAAAGGG

SEQ ID NO: 359

>3533 BLOOD 287871.2 U89505 g2078528 Human Hlark mRNA, complete cds. 0

45 GCCGCCGCCATTTTAGCGTTTTGTGTCAGAAGCGTCCGCGCCGCGAGGAGGAGGCC
 TGCTGGTTTCTGTGCGGGCTCTTGTGAGGATGGTGAAGCTGTTTCATCGGAAACCT
 GCCCCGGGAGGCTACAGAGCAGGAGATTCGCTCACTCTTCGAGCAGTATGGGAA
 GGTGCTGGAATGTGACATCATTAAGAATTACGGGCTTTGTGCACATAGAAGACA
 AGACGGCAGCTGAGGATGCCATACGCAACCTGCACCATTACAAGCTTCATGGGG

TGAACATCAACGTGGAAGCCAGCAAGAATAAGAGCAAAACCTCAACAAAGTTGC
 ATGTGGGCAACATCAGTCCCACCTGCACCAATAAGGAGCTTCGAGCCAAGTTTG
 AGGAGTATGGTCCGGTCATCGAATGTGACATCGTGAAAGATTATGCCTTCGTACA
 CATGGAGCGGGCAGAGGATGCAGTGGAGGCCATCAGGGGCCTTGATAACACAGA
 5 GTTTCAAGGCAAACGAATGCACGTGCAGTTGTCCACCAGCCGGCTTAGGACTGC
 GCCC GG GATGGGAGACCAGAGCGGCTGCTATCGGTGCGGGAAAGAGGGGCACT
 GGTCCAAAGAGTGTCCGATAGATCGTTCAGGCCGCGTGGCAGACTTGACCGAGC
 AATATAATGAGCAATACGGAGCAGTGCGTACGCCTTACACCATGAGCTATGGGG
 ATTCATTGTATTACAACAACGCGTACGGAGCGCTCGATGCCTACTACAAGCGCTG
 10 CCGTGCTGCCCGGTCCTATGAGGCAGTGGCAGCTGCAGCTGCCTCCGTGTATAAT
 TACGCAGAGCAGACCCTGTCCCAGCTGCCACAAGTCCAGAATACAGCCATGGCC
 AGTCACCTCACCTCCACCTCTCTCGATCCCTACGATAGACACCTGTTGCCGACCTC
 AGGAGCTGCTGCCACAGCTGCTGCTGCAGCAGCAGCCGGCTGCTGCTGTTACTGC
 AGCTTCCACTTCATATTACGGGCGGGATCGGAGCCCCCTGCGTCGCGCTACAGCC
 15 CCAGTCCCCACTGTTGGAGAGGGGCTACGGTTACGGGCATGAGAGTGAGTTGTCCC
 AAGCTTCAGCAGCCGCGCGGAATTCTCTGTACGACATGGCCCGGTATGAGCGGG
 AGCAGTATGCCGATCGGGCGCGGTACTCAGCCTTTTAAAGCTTGAGGTGGGATGT
 GTGTGGGCTGAAATTCCGAGCTGCGGTTGTGCATGAGAATACACCCTTCGTGGTA
 CCCCATCTCCGGGACGTTCTCGGCTCTGTGCGTTCAGTCCCTCAGGAACCGTGGA
 20 CCTTAATTTACCTTGCTAAGTTCAGACCTTCTCTTCCTTTCCTTTCCTTCTCC
 TGCCCATTTTCTGTTCTTCTGTCTTCAATACTTCTGTAGCTTCCCATTTCATGTT
 TCTTCTCCCAGCAGGCCTCATTTGTGTGCAGAACTGTGGTGGGGGCTGTGCTGTC
 TCCTCCCTGCCTCCTGCCTCCTGCGGCTGTGGATTGGGAATGACCTTGGTGAGA
 GTCTCACTGCTCCAGGGTCTCTTTTTGGTCCAAAGGCTAGACCTATAGAGTTGGA
 25 TCACTTTTTTCTTTCCGGTGAAATAAATGGTTTTTCAACTTAGGGTATGTGTGCT
 TTGCGAGACTTCTTGCTTGGGCTTGTT

SEQ ID NO: 360

>3584 BLOOD 978017.7 AF178532 g6851265 Human aspartyl protease (ASP21) mRNA,
 complete cds. 0
 30 AGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCCATCGTGGACAAC
 CTGCAGGGGGGACTCTGGCCGCGGCTACTACCTGGAGATGCTGATCGGGACCCCC
 CCGCAGAAGCTACAGATTCTCGTTGACACTGGAAGCAGTAACTTTGCCGTGGCAG
 GAACCCCGCACTCCTACATAGACACGTACTTTGACACAGAGAGGTCTAGCACAT
 35 ACCGCTCCAAGGGCTTTGACGTACAGTGAAGTACACACAAGGAAGCTGGACGG
 GCTTCGTTGGGGAAGACCTCGTCACCATCCCCAAAGGCTTCAATACTTCTTTTCTT
 GTCAACATTGCCACTATTTTTGAATCAGAGAATTTCTTTTTGCCTGGGATTAAATG
 GAATGGAATACTTGGCCTAGCTTATGCCACACTTGCCAAGCCATCAAGTTCTCTG
 GAGACCTTCTTCGACTCCCTGGTGACACAAGCAAACATCCCCAACGTTTCTCCA
 40 TGCAGATGTGTGGAGCCGGCTTGCCCGTTGCTGGATCTGGGACCAACGGAGGTA
 GTCTTGTCTTGGGTGGAATTGAACCAAGTTTGTATAAAGGAGACATCTGGTATAC
 CCCTATTAAGGAAGAGTGGTACTACCAGATAGAAATTCTGAAATTGGAAATTGG
 AGGCCAAAGCCTTAATCTGGACTGCAGAGAGTATAACGCAGACAAGGCCATCGT
 GGACAGTGGCACCACGCTGCTGCGCCTGCCCCAGAAGGTGTTTGATGCGGTGGT
 45 GGAAGCTGTGGCCCGCGCATCTCTGATTCCAGAATTCTCTGATGGTTTCTGGACT
 GGGTCCCAGCTGGCGTGCTGGACGAATTTCGGAAACACCTTGGTCTTACTTCCCTA
 AAATCTCCATCTACCTGAGAGACGAGAACTCCAGCAGGTCATTCCGTATCACAAT
 CCTGCCTCAGCTTTACATTCAGCCCATGATGGGGGCGGCCTGAATTATGAATGT
 TACCGATTCCGGCATTTCCTCCATCCACAAATGCGCTGGTGATCGGTGCCACGGTGA

TGGAGGGCTTCTACGTCATCTTCGACAGAGCCCAGAAGAGGGTGGGCTTCGCAG
 CGAGCCCCTGTGCAGAAATTGCAGGTGCTGCAGTGTCTGAAATTTCCGGGCCTTT
 CTAACAGAGGATGTAGCCAGCAACTGTGTCCCCGCTCAGTCTTTGAGCGAGCCC
 ATTTTGTGGATTGTGTCTATGCGCTCATGAGCGTCTGTGGAGCCATCCTCCTTGT
 5 CTTAATCGTCCTGCTGCTGCTGCCGTTCCGGTGTGAGCGTCGCCCCCGTGACCCTG
 AGGTCGTCAATGATGAGTCCTCTCTGGTCAGACATCGCTGGAAATGAATAGCCAG
 GCCTGACCTCAAGCAACCATGAACTCAGCTATTAAGAAAATCACATTTCCAGGGC
 AGCAGCCGGGATCGATGGTGGCGCTTTCTCCTGTGCCACCCCGTCTTCAATCTCT
 GTTCTGCTCCCAGATGCCTTCTAGATTCACTGTCTTTTGATTCTTGATTTTCAAGCT
 10 TTCAAATCCTCCCTACTTCCAAGAAAAATAATTAATAAAAAAAAAAACTTCATTCTAAA
 CCAAAACAGAGTGGATTGGGCTGCAGGCTCTATGGGGTTTGTTATGCCAAAGTGT
 CTACATGTGCCACCAACATAAAACAAAACCAAGCCTTGGCTCGTTCTCTCTCTC
 TTCAATCTCTGGAAAAATAAGTACATATAGTTGATAACCCCTCTTAGCTTACAGG
 AAGCTTTTTGTATTAATTGCCTTTGAGGTTATTTTCCGCCAGACCTCAACCTGGGT
 15 CAAAGTGGTACAGGAAGGCTTGCAGTATGATGGCAGGAGAATCAGCCTGGGGCC
 TGGGGATGTAACCAAGCTGTACCCTTGAGACCTGGAACCAGAGCCACAGGCCCC
 TTTTGTGGGTTTCTCTGTGCTCTGAATGGGAGCCAGAATCACTAGGAGGTCATC
 AACCGATGGTCCTCACAAGCCTCTTCTGAAGATGGAAGGCCTTTTGCCCGTTGAG
 GTAGAGGGGAAGGAAATCTCCTCTTTTGTACCCAATACTTATGTTGTATTGTTGG
 20 TGCAGAAAGTAAAAACACTACCTCTTTTGAGACTTTGCCAGGGTCCTGTGCCTGG
 ATGGGGGTGCAGGCAGCCTTGACCACGGCTGTTCCCTCACCCAAAAGAATTATC
 ATCCCAACAGCCAAGACCEAACAGGTGCTGAACTGTGCATCAACCAGGAAGAGT
 TCTATCCCCAAGCTGGCCACTATCAGATATGCTTACTCTTGCTTAAAATTAATAAA
 TCATGTTTTGATGAGAAAAAACTATTCTATTTCACTAGCTTAGTTGTCTCTTTTC
 25 CAAATCTTCTCTGGAAGTAGGTTGGCTATTACCCTGTGGGAAACAGGGAAATGG
 CCTGATGCCCCTATTTCTGACCAGCTGTCAGGGAAGGAAGATGCCAGATGTGCAG
 AAGACACAAGGTAACGTCTACTTATTCCCGTGCTTCGA

SEQ ID NO: 361

30 >3598 BLOOD 440860.23 AF044321 g3170263 Human cytochrome c oxidase assembly
 protein COX11 (COX11) mRNA, complete cds. 0
 ACTGCAACTTAATATTTCTATTTAGAACACAGAAAATGAAAATATTTAGAATAAG
 TTGTACATTTGATGACAAATAAATCACTATTAACAATTTAATACNNNNNNNNNN
 NNNNNNNNGGTTTGTTCAGAAAGAACTTTTGATGTCAGTAAATCTTCACAATCC
 35 CACCTGTACATTTTAACATTTCATGGACTTGTAATGGTGATGCTTTGGCTAACAGC
 CTAGTAGATGTATTTTATTTCAATTTTATGATACTACAGTTTCAAAGTAATTATTC
 AGAACTCTGAATATAAAATAGCCCTAAACCTTAAAGGACAAATCAAATTTGAAA
 TAAGAATTTAAATCTTTGGACAAGCTGTTAGGGCTTAGTGACTCCTCTTCTACTTT
 GAGCTTTTAAAATACTGACTATTCATAATGAAGGAAAATAGCAACCAACTCTTTT
 40 AGACACAATAAACATGGTTAGAAGTTCTGGCCTATGACTTGAAACAAATAACCC
 TGAGCATACATTTTGAACCAATGTCAGATTCAATTGCTGTAAGTNTGAAGAGT
 TAATAATCTGGAAGGGAATTATGGAATTAAGCTGAACCCATGCCTGCATATTTAA
 AAAACAAAGCGGCTTATTTTAATAGTATCAAACCTTTCAGTATGGTATTGAATAG
 TCAGTCATATATTCTAGCTAGGCATATGAGTTTCTTATGATAAAAGCTGAACCTTG
 45 TTCTCTCAAGTTTAAGTGAAAAAAATTAGTTGAGAAAAAATAATTATTTAAAATA
 TAAGCCTTCATATTATTGTACAATATTTCTCCTTTGAGAAGATAGGATATATGATT
 TTCCCAAAAATCACAACCTTTGAAGGAAGACTTAGTTGCTGACTTCAATTATATCC
 TGGAACCTGGCAACTTGTGCCCTTCCTTTGCTTCAAAAAAAGTGTAAGAAAGAGTG
 ATAAGATCAACTTTAATCATTTCTTGATCTTCAGCAAATTCAGGATCAATGTAGA

AAAACACTGGCATATCTACTTCCTCTTGGGGATTAAGCCTTTGTTCTTCAAAACA
GAAGCACTGGAAATTATAGAAAGATTTTAATAACATTTCTATTCTCGTATTACAT
AACAGAACTATACAGTTCTTTTATCTTAGCATTCCAGTACACTTCGTGATTTTAA
TAAGCATACTATTAAATACACAGTTCTGTGATAAATTAAGAGCATCTTTTCATCT
5 CAATGAGTTCTGCTTTAAGGATGAAGAACAATCTAATCTTAAAAGCAGATATC
CATTTGGTTTGGTTCTCAATCTCTGCATAGCAGGTATAGATAGTGAAGAAAAATA
GCTTGATGTTTAGAAGAAATTCGTTTTTCAGAAATCACAAAGATCTACTAAAACACT
AAGTTTCATACTAAACCGTTTCATGTATCTTTATCATATTCTGTAAAGTTTACACT
TTGATGTACCTGTATTTTATTGAAATACTGTCCAGCTTCAAATGGAACAATATTGT
10 ATGTAGAAATTCCAATTACTGGTTTGTGAGTAGGATTCTTAGCTCTGTAAAACGC
CAGTGCAGTCTCTCCTGGCACCACATATATTTCTGTTTGCTGAGGTCTAAAGTTCC
ACTGGAGACTTGCATGCACATCTGCATTAAAGCTAATTTTAATGATTTCGATCTTT
AACAGGCACCATGTTTTCAATCTTGTCTGAGGCATGACCTGC

15 SEQ ID NO: 362

>3627 BLOOD 198840.10 L08850 g437364 Human AD amyloid mRNA, complete cds. 0
GAGGAGGACTAGGAGGAGGAGGACGGCGACGACCAGAAGGGGGCCCAAGAGAG
GGGGCGAGCGACCGAGCGCCGCGACGCGGAAGTGAGGTGCGTGCGGGCTGCAG
CGCAGACCCCGGCCCGGCCCTCCGAGAGCGTCCTGGGCGCTCCCTCACGCCTTG
20 GCCTTCAAGCCTTCTGCCTTTCCACCCTCGTGAGCGGAGAACTGGGAGTGGCCAT
TCGACGACAGTGTGGTGTAAGGAATTCATTAGCCATGGATGTATTTCATGAAAG
GACTTTCAAAGGCCAAGGAGGGAGTTGTGGCTGCTGCTGAGAAAACCAAAACAGG
GTGTGGCAGAAGCAGCAGGAAAGACAAAAGAGGGTGTCTCTATGTAGGCTCCA
AAACCAAGGAGGGAGTGGTGCATGGTGTGGCAACAGTGGCTGAGAAGACCAAA
25 GAGCAAGTGACAAATGTTGGAGGAGCAGTGGTGACGGGTGTGACAGCAGTAGCC
CAGAAGACAGTGGAGGGAGCAGGGAGCATTGCAGCAGCCACTGGCTTTGTCAAA
AAGGACCAGTTGGGCAAGAATGAAGAAGGAGCCCCACAGGAAGGAATTCTGGA
AGATATGCCTGTGGATCCTGACAATGAGGCTTATGAAATGCCTTCTGAGGAAGG
GTATCAAGACTACGAACCTGAAGCCTAAGAAATATCTTTGCTCCCAGTTTCTTGA
30 GATCTGCTGACAGATGTTCCATCCTGTACAAGTGCTCAGTTCCAATGTGCCAGT
CATGACATTTCTCAAAGTTTTTACAGTGTATCTCGAAGTCTTCCATCAGCAGTGAT
TGAAGTATCTGTACCTGCCCCCACTCAGCATTTTCGGTGCTTCCCTTTCAGTGAAGT
GAATACATGGTAGCAGGGTCTTTGTGTGCTGTGGATTTTGTGGCTTCAATCTACG
ATGTTAAACAAATTAACCAACCTAAGTGACTACCACTTATTTCTAAATCCTCA
35 CTATTTTTTTGTTGCTGTTGTTTTCAGAAAGTTGTTAGTGATTTGCTATCATATATTATA
AGATTTTTTAGGTGTCTTTTAATGATACTGTCTAAGAATAATGACGTATTGTGAAA
TTTGTTAATATATATAATACTTAAAAATATGTGAGCATGAAACTATGCACCTATA
AATACTAAATATGAAATTTTACCATTTTTCGATGTGTTTTATTCACTTGTGTTTGT
ATATAAATGGTGAGAATTAATAAATAAACGTTATCTCATTGCAAAAATATTTTATT
40 TTTATCCCATCTCACTTTAATAATAAATAATCATGCTTATAAGCAACATGAATTAA
GAACTGACACAAAGGACAAAAATATAAAGTTATTAATAGCCATTTGAAGAAGGA
GGAATTTTAGAAGAGGTAGAGAAAATGGAACATTAACCCTACACTCGGAATTCC
CTGAAGCAACACTGCCAGAAGTGTGTTTTGGTATGCACTGGTTCCTTA

45 SEQ ID NO: 363

>3650 BLOOD 1102321.2 D15057 g493244 Human mRNA for DAD-1, complete cds. 0
CGCAAACAGCACATCCGGTGTGGTCGACGGGTCCTCCAAGAGTTTGGGGCGCGG
ACCGGAGTACCTTGCGTGCAAGTTATGTCGGCGTCGGTAGTGTCTGTCAATTCGCG
GTTCTTAGAAGAGTACTTGAGCTCCACTCCGCAGCGTCTGAAGTTGCTGGACGCG

TACCTGCTGTATATACTGCTGACCGGGGCGCTGCAGTTCGGTTACTGTCTCCTCGT
 GGGGACCTTCCCCCTTCAACTCTTTTCTCTCGGGCTTCATCTCTTGTGTGGGGAGTT
 TCATCCTAGCGGTTTGCCTGAGAATACAGATCAACCCACAGAACAAAGCGGATTT
 CCAAGGCATCTCCCCAGAGCGAGCCTTTGCTGATTTTCTCTTTGCCAGCACCATCC
 5 TGCACCTTGTTGTCATGAACTTTGTTGGCTGAATCATTCTCATTACTTAATTGAG
 GAGTAGGAGACTAAAAGAATGTTCACTCTTTGAATTTCTTGATAAGAGTTCTGG
 AGATGGCAGCTTATTGGACACATGGATTTTCTTCAGATTTGCACTTACTGCTAGCT
 CTGCTTTTTATGCAGGAGAAAAGCCCAGAGTTCACTGTGTGTCAGAACAACTTTC
 TAACAAACATTTATTAATCCAGCCTCTGCCTTTCATTAAATGTAACCTTTTGCCTT
 10 CCAAATTAAAGAACTCCATGCCACTCCTCAAAAA

SEQ ID NO: 364

>3715 BLOOD 1100675.3 U21128 g699576 Human lumican mRNA, complete cds. 0

CATATCTCTCTCCCATTCCATAGGGAATGAGCTGGGCTGTCTTTCTCCCCACGTT
 15 CACCTGCACTTCGTTAGAGAGCAGTGTTACATGCCACACCACAAGATCCCCACA
 ATGACATAACTCCATTCAGAGACTGGCGTGACTGGGCTGGGTCTCCCCACCCCC
 CCTTCAGCTCTTGTATCACTCAGAATCTGGCAGCCAGTTCCGTCCTGACAGAGTT
 CACAGCATATATTGGTGGATTCTTGTCCATAGTGCATCTGCTTTAAGAATTAACG
 AAAGCAGTGTCAAGACAGTAAGGATTCAAACCATTTGCCAAAAATGAGTCTAAG
 20 TGCATTTACTCTCTTCTGGCATTGATTGGTGGTACCAGTGGCCAGTACTATGATT
 ATGATTTTCCCCTATCAATTTATGGGCAATCATCACCAAATGTGCACCAGAATG
 TAACTGCCCCTGAAAGCTACCCCAAGTGCCATGTACTGTGATGAGCTGAAATTGAAA
 TAACTGTACCAATGGTGCCTCCTGGAATCAAGTATCTTTACCTTAGGAATAACAGA
 TTGACCATATTGATGAAAAGGCCTTTGAGAATGTAAGTATCTGGAGTGGGTCTAT
 25 TCTAGATCACAACCTTCTAGAAAACCTCCAAGATAAAAGGGAGAGTTTTCTCTAAA
 TTGAAACAACCTGAAGAAGCTGCATATAAACCACAACAACCTGACAGAGTCTGTG
 GGCCCACTTCCCAAATCTCTGGAGGATCTGCAGCTTACTCATAACAAGATCACAA
 AGCTGGGCTCTTTTGAAGGATTGGTAAACCTGACCTTCATCCATCTCCAGCACAA
 TCGGCTGAAAGAGGATGCTGTTTCAGCTGCTTTTAAAGGTCTTAAATCACTCGAA
 30 TACCTTGACTTGAGCTTCAATCAGATAGCCAGACTGCCTTCTGGTCTCCCTGTCTC
 TCTTCTAACTCTCTACTTAGACAACAATAAGATCAGCAACATCCCTGATGAGTAT
 TTCAAGCGTTTTAATGCATTGCAGTATCTGCGTTTTATCTCACAACGAACTGGCTG
 ATAGTGGAATACCTGGAAATCTTTCAATGTGTCATCCCTGGTTGAGCTGGATCT
 GTCCTATAACAAGCTTAAAAACATACCAACTGTCAATGAAAACCTTGAAAACCTAT
 35 TACCTGGAGGTCAATCAACTTGAGAAGTTTGACATAAAGAGCTTCTGCAAGATCC
 TGGGGCCATTATCCTACTCCAAGATCAAGCATTGCGTTTGGATGGCAATCGCAT
 CTCAGAAACCAGTCTTCCACCGGATATGTATGAATGTCTACGTGTTGCTAACGAA
 GTCACTCTTAATTAATATCTGTATCCTGGAACAATATTTTATGGTTATGTTTTTCT
 GTGTGTCAGTTTTTCATAGTATCCATATTTTATTACTGTTTATTACTTCCATGAATTT
 40 TAAAATCTGAGGGAAATGTTTTGTAAACATTTATTTTTTTTAAAGAAAAGATGAA
 AGGCAGGCCTATTTTCATCACAAGAACACACACATATACACGAATAGACATCAAA
 CTCAATGCTTTATTTGTAAATTTAGTGTTTTTTTATTTCTACTGTCAAATGATGTGC
 AAAACCTTTTACTGGTTGCATGGAAATCAGCCAAGTTTTATAATCCTTAAATCTT
 AATGTTCTCAAAGCTTGGATTAAATACATATGGATGTTACTCTCTTGCACCAAA
 45 TTATCTTGATACATTCAAATTTGTCTGGTTAAAAAATAGGTGGTAGATATTGAGG
 CCAAGAATATTGCAAAATACATGAAGCTTCATGCACTTAAAGAAGTATTTTTAGA
 ATAAGAATTTGCATACTTACCTAGTGAAACTTTTCTAGAATTATTTTCACTCTAA
 GTCATGTATGTTTCTCTTTGATTATTTGCATGTTATGTTTAATAAGCTACTAGCAA
 AATAAAACATAGCAAATGGCATCACTGTGTTTGACTTCTTGTGAAATTTCTGTAC

TTTGTATATAAAATACATAAAACAATAGATTAGAAATCAAAAGATATCTCTGGCC
 TGCAATATTTTACTGATGTGAACATAGGATTTTCCACTAAATAATTTGTCTACTTC
 TAGCATTCACTTACAAAGAGTTCTTAAAAACACCTATAATAGGTAAGTACTTAGATTTC
 ACAACTTACTTAGATATTTGTCATTATTCCCATTCTGCTGGTGTGTTTTACTGGTTCAT
 5 ATACAATGGTATTCTATTAGATAAGAAGCTGCTATGTGATCTCAGCACTCACTCC
 TTGGTTGTCAAGAAATGGTGGATAACTCACAGGATTAATAATGAATGAATATAA
 AATTTTCTGAAATAGATATTTAAAAAATCATTTTAGCTTGAAGCCAATATGTCTG
 GATCATAGGTTTTGAGTTCATAATCCAGTAATAACAGCTTTCAGCTTTCTATGAGT
 ATATACAATTCTATACAATGATAAATACTCTGCATATAATTTATAAAAAATAACTT
 10 CTGTTTTACCTAGTTAACAATAAAACCTATGTGTGGAGCCAAATGTTATGCAGAC
 AAAGGTCTGCTCATCCCATAACAGTGTATATATAGTCAAATATGTGTCTAGTACA
 AATAAAATGTATCTCTAAGGCATAAAATGTTTTAACACACCACTTTTAGTGAAGT
 CTATCTTATGGTACAGCGGCCTTTCATCAAAGGATCATCATTGAGACTGAGTTGA
 CTGGCAGATATGTGCGATGGATATTACATTAGGTACAATGTGTATTTTTGATTTTC
 15 ATGAGTTTTCTACATTAAGGTAAATTCCTTAGAGTGTGATAGCAGCCTCAGTTTA
 TTTGTTGGTTTAAACTTGAAATCTACTTTTTCTCGATAAAACTATAATGTAGATGA
 ATTG

SEQ ID NO: 365

20 >3743 BLOOD 1328438.3 U35451 g1177844 Human heterochromatin protein p25 mRNA,
 complete cds. 0

GGGAGCGGCGGGGAGCGCAGACTGCGAGGCTCTTTTGTTCGGCTGAGGGGAGGG
 CGGTTGGCCGGGGGACTGCGGTAGGCCGCTTCAGTGAGGGAGCGCCACTCCGGCC
 ACCCGGCTTGCTGCTTCTCTGGGCGCCACTCCCCAGGCGACCCGACGCGACGCG
 25 CCAGTAGCGCAGCACCGATTCTCTCGGGGCTCTTGGGCGCTGCTCTGAGCAGCG
 TCACCCTTTACACCAGAAAGCTGGCGGGCACTATGGGGAAAAACAACAAGA
 AGAAAGTGGAGGAGGTGCTAGAAGAGGAGGAAGAGGAATATGTGGTGGAAAAA
 GTTCTCGACCGTCGAGTGGTAAAGGGCAAAGTGGAGTACCTCCTAAAGTGGAAAG
 GGATTCTCAGATGAGGACAACACATGGGAGCCAGAAGAGAACCTGGATTGCCCC
 30 GACCTCATTGCTGAGTTTCTGCAGTCACAGAAAACAGCACATGAGACAGATAAA
 TCAGAGGGGAGGCAAGCGCAAAGCTGATTCTGATTCTGAAGATAAGGGAGAGGAG
 AGCAAACCAAAGAAGAAGAAAGAAGAGTCAGAAAAGCCACGAGGCTTTGCTCG
 AGGTTTGGAGCCGGAGCGGATTATTGGAGCTACAGACTCCAGTGGAGAGCTCAT
 GTTCTGATGAAATGGAAAACTCTGATGAGGCTGACCTGGTCCCTGCCAAGGA
 35 AGCCAATGTCAAGTGCCACAGGTTGTATATCCTTCTATGAGGAAAGGCTGACG
 TGGCATTCTACCCCTCGGAGGATGATGACAAAAAAGATGACAAGAACTAACGC
 TCCTGAGTACCAGCCCCTGTCACATCTGACTGTGGGTTTCAAGTGGGAAGGGAAG
 GAGTTCTACTTGTCTTGACACCATAGAGGTGGCTTGAGAAGATGTCCTTTGAAGA
 GCCAGTATAGTTTCTGTGCCCTGCAGCAGCCCAAGTGCTTTAAAGCCGTTTCAAG
 40 CTGTATAGTTTGCACACCCATCCCAGTGGAGGGGAAAGGGGATAAGTGTTTCAA
 GGCAACCTTTTCTGCACTTTGCTGCGAAAAGCAAAGGGCCTTCTATGAAGGACAA
 AACTTGCAGAATTGGGTGTGTGGGAGAGCAAAAAATACTGTAGATCTTCAAAG
 AGCATCTCCACAACCCACAGCCTTCTTCCAATAGTGTTAACTCTGCATTTTTACA
 GCGTAGCATGTGTGTAGTTTTTGGCTATTACTGGTGTATTATTTGGGGGAGGGAG
 45 GGATGGGGAGGGGAGAAAGGGAGATGGGTAGCATCATTTTGATTAAACATTTGGG
 GCCTGATAGGGGAAATGGTGAAGCAATGGAAAAGAACAGACAATAATGATTTG
 CTTCTATGTCCAGAATATTTTACCTTTAAAAAATGTCATTGGCACCATAAATAA
 GGACTGTGAGAGACTGTTTAAAAGCTGTGAAAGTCTGAAACCTATAAGCCAAGG
 TGTTCCCTGCCTAAACTTATTGCTGTTCCACAAAGGACTAAGCCTGTTTCAATAGT

TACCAAAGTTGCCATTTTGGAGATGGAAATTGACGAGGAGGGAAGGTCTTTTATT
 GGAGAGTATACAGTACAAGCAGATCATTCTGCCTTAGAGGTGCTAATTCCCGAA
 ATTAGAAGACCCCTTTCTTTTCCAGTAACGAAGTTATAAATATCAGCTTGTTTCATCC
 AAGCCACTGGCTGAGGTGTTAGGAAGAGGAAGAGGGTGGTAGAGGAGGTAAGA
 5 CAGTAGGGGAAAGACAAGGGCCCATGCTCTTAGTGGGGGAAAACCTCTTGGAGCCGT
 TTAATTTGAGCTTTGAACACTGAAACCATTGTTGGCAGGGTTCAGTCACTGACAG
 CACAAGTTTCACTGAATTGATCCAAGAGTTTAGTGATTTCAAAAGCCTTGGTCTC
 AGGAGAAGATTAACTTTTCATATTGGGCAGTGGTTCACCTTAAAACACACACATA
 CACACACAAAACAATTTTTTAAGAAATCCTAATAAGTAACATACCCAAAATGCTC
 10 TGTCTTGAGTCATGAGAACCATCAGTTCTTGATATTGTCTAGACTTGCACTCTAGA
 GCTACGTTGTAAAATTCTTTTAGGCATGTGTTAGATTCTGTGTAAACTTTGTTTA
 AATGTAAACTTCATACTACATTGTCAGTTTTTGTCTTAATAAAACTATAGATTTAT
 AATCCCTGATTTCTGTCTTAAGTCTTACCAGGAACCCTTCTTGCCTTATAGGTTCA
 GCCTGTTGGAAATGGCTTCCTCACTTGAATGGTTTTATTTCTTGAACACTGTAGGC
 15 TTGAAAATCTAGTGCCTGGCCTGAATCTTTAAGTGGTCAC

SEQ ID NO: 366

>3747 BLOOD 233301.19 M81934 g180172 Human cdc25B mRNA, complete cds. 0

GCCAGCTGTGCCGGCGTTTGTGGCTGCCCTGCGCCCGGCCCTCCAGCCAGCCTT
 20 CTGCCGGCCCCGCGCGATGGAGGTGCCCCAGCCGGAGCCCGCGCCAGGCTCGG
 CTCTCAGTCCAGCAGGCGTGTGCGGTGGCGCCAGCGTCCGGGGCCACCTCCCGGG
 CCTCCTGCTGGGATCTCATGGCCTCCTGGGGTCCCCGGTGCGGGGGGGCGGGCTCC
 TGGGCGGTACACACCCTCACCCAGACCATGCAAGACCTCGCCGGGGCTCGGCAGCC
 GCAGCCCGCTGACGCACCTATCCGTGTCTCGAEGGGGATCCGAATCCTCCCTGTC
 25 GTCTGAATCCTCCGAATCTTCTGATGCAGGTCTCTGCATGGATTCCCCCAGCCCTA
 TGGACCCCCACATGGCGGAGCAGACGTTTGAACAGGCCATCCAGGCAGCCAGCC
 GGATCATTTCGAAACGAGCAGTTTGCCATCAGACGCTTCCAGTCTATGCCGGTGAG
 GCTGCTGGGGCCACAGCCCCGTGCTTCGGAACATCACCAACTCCCAGGCGCCCGAC
 GGCCGGAGGAAGAGCGAGGCGGGCAGTGGAGCTGCCAGCAGCTCTGGGGAAGA
 30 CAAGGAGAATGATGGATTTGTCTTCAAGATGCCATGGAAGCCCACACATCCCAG
 CTCCACCCATGCTCTGGCAGAGTGGGCCAGCCGCAGGGAAGCCTTTGCCAGAG
 ACCCAGCTCGGCCCCCGACCTGATGTGTCTCAGTCCTGACCGGAAGATGGAAGTG
 GAGGAGCTCAGCCCCCTGGCCCTAGGTCGCTTCTCTCTGACCCCTGCAGAGGGGG
 ATACTGAGGAAGATGATGGATTTGTGGACATCCTAGAGAGTGACTTAAAGGATG
 35 ATGATGCAGTTCCCCCAGGCATGGAGAGTCTCATTAGTGCCCCACTGGTCAAGAC
 CTTGGAAGGAAGAGGAAAAGGACCTCGTCATGTACAGCAAGTGCCAGCGGCT
 CTTCCGCTCTCCGTCCATGCCCTGCAGCGTGATCCGGCCCATCCTCAAGAGGCTG
 GAGCGGCCCCAGGACAGGGACACGCCCGTGCAAGAATAAGCGGAGGCGGAGCGT
 GACCCCTCCTGAGGAGCAGCAGGAGGCTGAGGAACCTAAAGCCCCGCGTCCTCCG
 40 CTCAAAATCACTGTGTACGATGAGATCGAGAACCTCCTGGACAGTGACCACCG
 AGAGCTGATTGGAGATTACTCTAAGGCCTTCCTCCTACAGACAGTAGACGGAAA
 GCACCAAGACCTCAAGTACATCTCACCAGAAACGATGGTGGCCCTATTGACGGG
 CAAGTTCAGCAACATCGTGGATAAGTTTGTGATTGTAGACTGCAGATACCCCTAT
 GAATATGAAGGCGGGCACATCAAGACTGCGGTGAACTTGCCCCTGGAACGCGAC
 45 GCCGAGAGCTTCTACTGAAGAGCCCCATCGCGCCCTGTAGCCTGGACAAGAGA
 GTCATCCTCATTTTCCACTGTGAATTCTCATCTGAGCGTGGGCCCCGCATGTGCCG
 TTTCATCAGGGAACGAGACCGTGCTGTCAACGACTACCCAGCCTCTACTACCCT
 GAGATGTATATCCTGAAAGGCGGCTACAAGGAGTTCTTCCCTCAGCACCCGAACT
 TCTGTGAACCCAGGACTACCGGCCCATGAACCACGAGGCCTTCAAGGATGAGC

TAAAGACCTTCCGCCTCAAGACTCGCAGCTGGGCTGGGGAGCGGAGCCGGCGGG
 AGCTCTGTAGCCGGCTGCAGGACCAGTGAGGGGCCTGCGCCAGTCCTGCTACCTC
 CCTTGCCTTTCGAGGCCTGAAGCCAGCTGCCCTATGGGCCTGCCGGGCTGAGGGC
 CTGCTGGAGGCCTCAGGTGCTGTCCATGGGAAAGATGGTGTGGGTGTCCTGCCTG
 5 TCTGCCCCAGCCCAGATTCCCCTGTGTTCATCCCATCATTTTCCATATCCTGGTGCC
 CCCCACCCCTGGAAGAGCCCAGTCTGTTGAGTTAGTTAAGTTGGGTAAATACCAG
 CTTAAAGGCAGTATTTTGTGTCCTCCAGGAGCTTCTTGTTTCTTGTTAGGGTTAA
 CCCTTCATCTTCTGTGTCTGAAACGCTCCTTTGTGTGTGTGTCAGCTGAGGCTG
 10 GGGGAGAGCCGTGGTCCCTGAGGATGGGTGAGAGCTAAACTCCTTCTGCGCTG
 AGAGTCAGCTCTCTGCCCTGTGTACTTCCCGGGCCAGGGCTGCCCTAATCTCTG
 TAGGAACCGTGGTATGTCTGCCATGTTGCCCTTTCTCTTTTCCCCTTCTGTCCC
 ACCATACGAGCACCTCCAGCCTGAACAGAAGCTCTTACTCTTTCCTATTTCACTG
 TTACCTGTGTGCTTGGTCTGTTTGACTTTACGCCCATCTCAGGACACTTCCGTAGA
 CTGTTTAGGTTCCCCTGTCAAATATCAGTTACCCACTCGGTCCCAGTTTTGTTGCC
 15 CCAGAAAGGGATGTTATTATCCTTGGGGGCTCCCAGGGCAAGGGTTAAGGCCTG
 AATCATGAGCCTGCTGGAAGCCCAGCCCCTACTGCTGTGAACCCTGGGGCCTGAC
 TGCTCAGAACTTGCTGCTGTCTTGTGCGGATGGGATGGAAGGTTGGATGGATGG
 GTGGATGGCCGTGGATGGCCGTGGATGCGCAGTGCCTTGCATACCCAAACCAGG
 TGGGAGCGTTTTGTTGAGCATGACAGCCTGCAGCAGGAATATATGTGTGCCTATT
 20 TGTGTGGACAAAATATTTACACTTAGGGTTTGGAGCTATTCAAGAGGAAATGTC
 ACAGAAAGCAGCTAAACCAAGGACTGAGCACCCCTCTGGATTCTGAATCTCAAGAT
 TGGGGGTCAGGGCTGTGCTTGAAGGCCCTGCTGAGTCATCTGTTAGGGCCTTGGTTC
 AATAAAGCACTGAGCAAGTTGAGAAACC
 25 SEQ ID NO: 367
 >3750 BLOOD 898939.8 U05875 g463549 Human clone pSK1 interferon gamma receptor
 accessory factor-1 (AF-1) mRNA, complete cds. 0
 GCGGGCCCTGCGCGCCCTGCGCTCGCCATGGCGGTTTGGGCGGCGACGTGAGCG
 GCTCCGCGGACCCCGAGCGGGGCCCCGGCCGCGACCTGAGCCGCGCCGAGCGC
 30 CCGGGGCCATGCGACCGACGCTGCTGTGGTCGCTGCTGCTGCTGCTCGGAGTCTT
 CGCCGCCGCGCCGCGGCCCCGCCAGACCCTCTTCCCAGCTGCCCGCTCCTCAG
 CACCCGAAGATTGCGCTGTACAACGCAGAGCAGGTCCTGAGTTGGGAGCCAGTG
 GCCCTGAGCAATAGCACGAGGCCTGTTGTCTACCAAGTGCAGTTTAAATACACCG
 ACAGTAAATGGTTCACGGCCGACATCATGTCCATAGGGGTGAATTGTACACAGA
 35 TCACAGCAACAGAGTGTGACTTCACTGCCGCCAGTCCCTCAGCAGGCTTCCCAAT
 GGATTTCAATGTCACTCTACGCCTTCGAGCTGAGCTGGGAGCACTCCATTCTGCC
 TGGGTGACAATGCCTTGGTTTCAACACTATCGGAATGTGACTGTCGGGCCTCCAG
 AAAACATTGAGGTGACCCAGGAGAAGGCTCCCTCATCATCAGGTTCTCCTCTCC
 CTTTGACATCGCTGATACCTCCACGGCCTTTTTTTGTTATTATGTCCATTACTGGG
 40 AAAAAGGAGGAATCCAACAGGTCAAAGGCCCTTTCAGAAGCAACTCCATTTTCAT
 TGGATAACTTAAAACCCTCCAGAGTGTACTGTTTACAAGTCCAGGCACAACCTGCT
 TTGGAACAAAAGTAACATCTTTAGAGTCGGGCATTTAAGCAACATATCTTGCTAC
 GAAACAATGGCAGATGCCTCCACTGAGCTTCAGCAAGTCATCCTGATCTCCGTGG
 GAACATTTTCGTTGCTGTGCGGTGCTGGCAGGAGCCTGTTTCTTCTGCTCCTGAAA
 45 TATAGAGGCCTGATTAAATACTGGTTTCACACTCCACCAAGCATCCCATTACAGA
 TAGAAGAGTATTTAAAAGACCCAACCTCAGCCCATCTTAGAGGCCTTGGACAAGG
 ACAGCTCACCAAAGGATGACGTCTGGGACTCTGTGTCCATTATCTCGTTTCCGGA
 AAAGGAGCAAGAAGATGTTCTCAAACGCTTTGAACCAAAGCATGGGCCTAGCC
 CACTGGCTCCCTGGAAGAGATCAAGCCATCGGAGCTGCTAGAGTTCTGTCTGGAC

TTTCCAGAGACCAGTATTCCCTTTTGCTGCCTCTAAAAGGCCTGTCCCTGCAGAC
ATGAGAGACAGCAGGTCTCATGGGGGTGACAAGCTTTTTTTTTTTTCTTAAAGA
ATTTTCAAAATCAAATTCAGAATGATTTTACGGAGATATCCCAGGAAAATTAAG
GCTTCTCTTAAACACTAAAAAGGCATGTAATTGCTTGTTAGCAAAATGGATATGA
5 CACATCTCTGATACTTTTTTCATTATTGGTTGGGCTGAGCAGTCAGAAGACCTGGT
CGTCGTCTTGACTTTGGCAAATGAGCCGGAGCCCCCTTGGGCAGGTCACACAACCT
GTCCCAGCGAGGGACACTGAGTGGCCCTTCATGTACATCCATGGTGTGCTGGCTT
AAAATGTAATTAATCTTGTAATATACTCCTAGTAATTTAAGATTTTGTTTTAAA
CTGGAAATAAAAGATTGTATAGTGCATGTTTTTAAAGTCTATGTGAAGTGT
10 CTTTATTGTAGCCTATTTTCTGCAGAGTTTCAGCTTTCTAAAATTACTCAATCTAA
ACTTGTTTTTTCTTAAATAACACCTGCTAGAGCTACTGAGGCCTCATGGGAAGTC
AGCAAACACTTCCTATGGATGTCACTTGATCCTCCCAAAGTGCTGGGATTAC

SEQ ID NO: 368

15 >3770.BLOOD 475174.21 S67970 g460902 ZNF75=KRAB zinc finger [Human, lung
fibroblast, mRNA, 1563 nt]. 0

TAGGAAACAGAAATTTTCCCTGGCTATTTTCTACCCACAGCTGTCATGATCAACA
GATGTTAGCCCTTTCTGAGCAGAAAAGAATCAAACACTGGAAGATGGCATCTAA
ACTCATCCTGCCTGAGTCCCTGGTGAGCTGTTATTTCTGGCTTTTTACAGGTGACT
20 TGAAGTGTGGCCTTGCCCTCTGCTTGTCCTATTGCCTAGGACTCATAGTGTCCAGCA
GGTGCTTTGAGGCATTTTAGCCCCAGTTATTCTCTAGGCAACTAGGCTTGGCACA
CTGGGAACTGGGCACCTCCCAGGTGATTTACTGATCCTCTTTGCTCCTTCTTTCT
CTGCCTTCTCACTTTTTTCCCTAAATCTTGTAAGTGTTCACATCTTCAGCACCTGGC
CTACCATGTAATTCAGAAATGGGTGGTAGGACAGCTTCTGAAGTGGCAAGTACT
25 AAAGTATAGCCCATTTCTCTTTAGAGTTTGTGACATTTGAAGATGTGGCTGTG
TATTTTCTGAGGAAGAGTGGCAATTATTGAATCCTCTTGAGAAGACTCTCTACA
ATGATGTAATGCAGGATATCTATGAGACTGTCATCTCTCTAGGGTTAAAGCTAAA
AAATGACACTGGAAATGATCATCCTATATCTGTTTCTACATCAGAAATACAAACA
TCAGGATGCGAAGTATCAAAAAAGACCAGAATGAAAATTGCCAGAAAACAATG
30 GGCAGGGAATACTGCTGGTGATACACACAGTGTACAGAAATGGCATCGAGCTTTT
CCAAGGAAGAAAAGAAAAGAAACCTGCAACTTGTAACAAGAGCTTCCAAAACCTT
ATGGATCTTCATGGGAAAGGCCCCACAGGGGAGAAACCTTTTAAGTGTGAGGAA
TGTGGGAAAAGCTTCAGAGTTAGCTCTGATCTTATTAACACCACAGAATTCACA
CTGGAGAGAAACCCTATAAATGTCAACAATGTGACAGGAGGTTTAGATGGAGTT
35 CAGATCTTAATAAGCACTTCATGACCCATCAAGGAATAAAACCATATAGATGCTC
ATGGTGTGGGAAAAGCTTTAGTCATAACACAAATCTACACACACACCAAAGAAT
TCACACAGGAGAGAAGCCCTTTAAATGTGATGAATGTGGAAAAAGATTCAATCA
GAACTCCACCTTATTAAACACCAGAGAACTCACACAGGTGAGCAGCCTTATAC
ATGTAGCTTATGCAAGAGAAACTTTAGTAGGCGATCGAGCCTTCTTAGACACCAG
40 AAAGTCCACAGAAGAAGGGAAGCATGTCTAGTGTCTCCAAACTGAGGAAAGTTA
CCATGTAGAGCTTGACTTTAGAAGTGGTGAAAGAATACAAAATTATGAGGCACC
CAATGATAGGAATCTGTGATTAATAAAACATTTGGGAAGGGTACATGTTACACTT
CACAAAAGGAATCTAAGCTGTCTGTTTTATTGAGCATTGCATCTTCTGTGCCTA
GCACAAGAGTTGATACATAAGGAGTACTTTATAAATAAAAAAATGAAAGTGTAG
45 TGATGAGATTCTTTAGCTATCTATCTATATGTATATATCTGGTTATTCAAAGCTT
CCCCACCCCAGTCATCTAAATTTTTCAGGTATCAAGTGCTCAACAGACATATGA
TAGTCAAGGCTCTTAGTCTCATTTTTTACTCTTTGTCAAGAGAAATGGAAAATAA
GAGTACTTGGGCCCTCTTAAGGGAGCTCAGAGAGAATTACTAAATTAGGGACAG
TTTCAATAGTTATCATTCTATCTACATGAACAATCAAGACCAGGACTCAGGGAAC

TTTACTCTGTAACAGAAAGAGAGGATTCAGTGTTTGGCCCTGGGAGAATTGTCCCA
 TTCTTGTTGCTTCTCTCCTGAGTACCCACTACCACAATGTCTTCTGTCAAGGAATT
 ACAAGTAGCAAGGGAAGGTCTGAATGTAAGGACAGGCCTAGGGACCTTGCAAGC
 ACTTGATATCTCTCCTCTTGCTGACTTTGTCAACATAGACATATAGTGAAATGATG
 5 AGGGAGGCAGTCTTGCCCTCATCCAGGTATCTGGTTTTTTTTTTGTAGAAAGCAC
 AGATAAGTGGTAAATGGTCTTTTTCTGACTTTCATTATGTGGACTGGATGGAGGC
 TTTCAAACCTGGTGCCATACTGCTGCAGGACCTAAAGGGAGCCCCATCTTTATGGC
 TGATCAACTACAACCTATATGCCTGAATACTCTGCAAGAAGGCCTGGAGATTTT
 GCAAACTGATTTATTGAGAATGGCAAGGAGAGCCTTGTGAACTTTTAGCTTTGG
 10 TGCACAGCTGATACCAGGAGGGAACATCCTGAAGTGTGAGAGAAAAGTAAGGCA
 TATGGCTCACAGTGATGATGCCAGTCAGAGCCAGGCCAGATGGAAATTGTTTTCT
 GATGTTACTGGTTTTCTTTCCCTATTAGCCAAAGTGACTATCTCTTAAGAGAAGA
 TAATGTGACGTCAAGGGAAGTTGGAAGGCATGGATTTATATCTATGTCAGATCCT
 GGTTTATAATGTTGGCCAAGGCTTATTTATATATGTTTATTTAGTATTCCATAAAA
 15 TTGTACTTCGTAATGAAAATGACACATTTTATCTTAAATTTAGACAATAAACAAA
 ACTTTGTTACCAAATC

SEQ ID NO: 369

>3787 BLOOD 256010.6 X63679 g37264 Human mRNA for TRAMP protein. 0

20 GCGGGCTGCGTACTGGCTGTGGGATGGGAAGTGAAGCCCCAGCGAGCGGCTGCA
 GCGGGGCCGTGAGGAGCAGCCAGCGGGAGGCGGCGGCGAGTCGGTGAGCAGCT
 GGGGAAGAGCAGAACC GGGGGCGGAGCACCTGCAGGCGCGGGCGGCGGCCCCACC
 ATGGCGATTTCGCAAGAAAAGCAGCAAGAGCCCCCAGTGCTGAGCCACGAATTC
 GTCCTGCAGAATCACGCGGAGATCGTCTCCTGTGTGGCGATGGTCTTCCTGCTGG
 25 GGCTCATGTTTGAGATAACGGCAAAAGCTTCTATCATTTTTTGTACTCTTCAGTAC
 AATGTCACCCTCCCAGCAACAGAAGAACAAGCTACTGAATCAGTGTCCCTTTATT
 ACTATGGCATCAAAGATTTGGCTACTGTTTTCTTCTACATGCTAGTGGCGATAATT
 ATTCATGCCGTAATTCAAGAGTATATGTTGGATAAAATTAACAGGCGAATGCACT
 TCTCCAAAACAAAACACAGCAAGTTTAATGAATCTGGTCAGCTTAGTGCGTTCTA
 30 CCTTTTTGCCTGTGTTTGGGGCACATTCATTCTCATCTCTGAAAACACATCTCAG
 ACCCAACTATCTTATGGAGGGCTTATCCCCATAACCTGATGACATTTCAAATGAA
 GTTTTTCTACATATCACAGCTGGCTTACTGGCTTCATGCTTTTCCTGAACTCTACT
 TCCAGAAAACCAAAAAAGAAGATATTCCTCGTCAGCTTGTCTACATTGGTCTTTA
 CCTCTTCCACATTGCTGGAGCTTACCTTTTGAACCTGAATCATCTAGGACTTGTTT
 35 TTCTGGTGCTACATTATTTTGTGAATTTCTTTTCCACATTTCCCGCCTGTTTTATT
 TTAGCAATGAAAAGTATCAGAAAGGATTTTCTCTGTGGGCAGTTCTTTTTGTTTTG
 GGAAGACTTCTGACTTTAATTCTTTTCACTAACTAAAGGCAGATCTTCTAAAAAAG
 GAACAGAAAATGGTGTGAATGGAACATTAACCTCAAATGTAGCAGACTCTCCCC
 GGAATAAAAAAGAGAAATCTTCATAATGAATTATAAACTAATTGATTAATGTCCC
 40 CAAAGAAATCTGCTTTCTACTATATCTTTCAGCATTAGAGATTTTCTGTTCTTGA
 AAATACAGTCTGTGCTCTTTGATTTTTGCTATTGTACGGTTTCATGCATTTTTTTAA
 AGGGCATTTGAGGGGAGGATTATTGCTATGAATGAAAAAATATTTTAGCTTAG
 ACTAAGCTACCTGCCTTCAAATAGTTTAGGGACCACCACCATATTTTATTTTGT
 TTTATTTTTGAACATTTTTCTAATGATTTGGAGAGAAAACATTTTACAAAAATTCC
 45 ACATATCAGTGATACAATTTCTTGCTGTCACCAATTTTTTATAATAGCAGAGTGG
 CCTGTTCTAAGAAGGCCATATTTTTTAAGTTATCTTTCAGGGTAACATGGAAATA
 CTATAAAGTTGGATGTCAAACCTTAAATATGTTTTCACTGTTCTCTAATTTTTTGA
 ATTTTTGTAGACTTTACACCTGGAAAAAAGATTTGTAAAATCACCGGAACAATT
 GTGTGCTTTATTTTATAGGTAGTGGTTATTAGTATTACATCCCCATTTTAAAAACA

AAAACATAATAATGGTTACAACACGTGGAGTTTTACTAACATACATATTAAATCA
AAGTATATTCTTAAAAGTACTTGTGAAGTAAAATCTTTCTTGTGCATTTTCAATAC
TTGTAAACTGGAAATCAGAAAATATTTACTATGAACAGGAAAATCTGACATATA
GCCCTTTTTGATATGTTTATTAATAATGATTCTTAATGGGGCTCATAATAAGTTTA
5 ATATGCACAGCATCTTAGAAAAAGTTTAACCTGCAAACACTTTTAAAACATAATGC
CTACTTGATTTATATCTATAAAAAGACTGACAGGTAATTATATTTGGAAAACATT
TAATGCACTAACTTTAAAGAAATTGAAAATTCAGGTGGATAAATAGTCTTACAAA
AGACAATGTGCTTTATGTTATACCTATAGCTTTGGTCCCATCTTTAATTGAGAAAC
ATTTATCTGTATAAAACATATTTTTGGATAAATATATATATATATATTTGTATTGC
10 TACAGAAAGGCTCTAAAAAGCATTTGAGGAAAATATTTGGTTCCCTTTTCTATAA
TCATCCTTTAAGATTCTTATAGCTACATTTGGTTTATTCATCATATTTACAGTATA
TATATTGTTCTTTTCAGTGTTACATCTTGTTCCCCATTTCTCACTTGTTGTCACCCAG
CTGTTTGTGCCATTTTTAGTGTAAGTTGCAGACCTATTAGATCTGCAGTTTAAG
TTGCCATGCTGCTAGGAAATTGTCTTTTCTTTCTAGCTGTTAACCTACTTCCTG
15 GAAAAAGTAGTAGCTCTCTGTAGCATTATGGAGTTTCAGTGGAACCAAATTTTTG
CCATTA AAAACTGGCATTATACTGAACATAACATTGAGAAATCAATCAAAATAA
AAATTTTTACTTTTACAAGTTGTATCCTGGATGTTTCTGTCAATTGTTGGTGATTAG
GCTATTTTGGTATATAACCTCATTA AAAATGTACCATATTTAAAACACTTCATAGA
CATTCAGAATAACCCTTTTCAA AATTGTGTTCTGCAAATAAACAGATTTGTTCCA
20 CAGAAAA

SEQ ID NO: 370

>3790 BLOOD Hs.76252:gnl|UG|Hs#S4668:H.sapiens mRNA for endothelin-1 receptor
/cds=(484,1767)/gb=X61950/gi=288312/ug=Hs:76252/len=4105

25 GAATTCGCGGCCGCTCTTGCGGTCCCAGAGTGGAGTGGAAGGTCTGGAGCTTTG
GGAGGAGACGGGGAGGACAGACTGGAGGCGTGTTCTCCTCCGGAGTTTTCTTTTCG
TGCGAGCCCTCGCGCGCGGTACAGTCATCCCGCTGGTCTGACGATTGTGGAGAG
GCGGTGGAGAGGCTTCATCCATCCCACCCGGTCGTCGCCGGGGATTGGGGTCCCA
GCGACACCTCCCCGGGAGAAGCAGTGCCCAGGAAGTTTTCTGAAGCCGGGGAAG
30 CTGTGCAGCCGAAGCCGCCGCCGCGCCGGAGCCCGGGACACCGGCCACCCTCCG
CGCCACCCACCCTCGCTTTCTCCGGCTTCCTCTGGCCCAGGCGCCGCGCGGACCC
GGCAGCTGTCTGCGCACGCCGAGCTCCACGGTGAAAAAAAAGTGAAGGTGTAA
AAGCAGCACAAAGTGCAATAAGAGATATTTCTCAAATTTGCCTCAAGATGGAAA
CCCTTTGCCTCAGGGCATCCTTTTGGCTGGCACTGGTTGGATGTGTAATCAGTGAT
35 AATCCTGAGAGATACAGCACAAATCTAAGCAATCATGTGGATGATTTCAACCACTT
TTCGTGGCACAGAGCTCAGCTTCCTGGTTACCACTCATCAACCCACTAATTTGGT
CCTACCCAGCAATGGCTCAATGCACAACCTATTGCCACAGCAGACTAAAATTACT
TCAGCTTTCAAATACATTAACACTGTGATATCTTGTAATTTTCATCGTGGGAAT
GGTGGGGAATGCAACTCTGCTCAGGATCATTACCAGAACAATGTATGAGGAA
40 TGGCCCCAACGCGCTGATAGCCAGTCTTGCCCTTGGAGACCTTATCTATGTGGTC
ATTGATCTCCCTATCAATGTATTTAAGCTGCTGGCTGGGCGCTGGCCTTTTGATCA
CAATGACTTTGGCGTATTTCTTTGCAAGCTGTTCCCCTTTTGCAGAAGTCCTCGG
TGGGGATCACCGTCCTCAACCTCTGCGCTCTTAGTGTTGACAGGTACAGAGCAGT
TGCCTCCTGGAGTCGTGTTCAAGGAATTGGGATTCTTTGGTAACTGCCATTGAA
45 ATTGTCTCCATCTGGATCCTGTCCTTTATCCTGGCCATTCTGAAGCGATTGGCTT
CGTCATGGTACCCTTTGAATATAGGGGTGAACAGCATAAAACCTGTATGCTCAAT
GCCACATCAA AATTCATGGAGTTCTACCAAGATGTAAAGGACTGGTGGCTCTTCG
GGTTCTATTTCTGTATGCCCTTGGTGTGCACTGCGATCTTCTACACCTCATGACT
TGTGAGATGTTGAACAGAAGGAATGGCAGCTTGAGAATTGCCCTCAGTGAACAT

CTTAAGCAGCGTCGAGAAGTGGCAAAAACAGTTTTCTGCTTGGTTGTAATTTTTG
CTCTTTGCTGGTTCCCTCTTCACTTAAGCCGTATATTGAAGAAAACGTGTGTATAAC
GAAATGGACAAGAACCGATGTGAATTACTTAGTTTTCTTACTGCTCATGGATTACA
TCGGTATTAACCTTGGCAACCATGAATTCATGTATAAACCCCATAGCTCTGTATTTT
5 GTGAGCAAGAAATTTAAAAATTGTTTCCAGTCATGCCTCTGCTGCTGCTGTTACC
AGTCCAAAAGTCTGATGACCTCGGTCCCCATGAACGGAACAAGCATCCAGTGGA
AGAACCACGATCAAAACAACCACAACACAGACCCGGAGCAGCCATAAGGACAGC
ATGAACTGACCACCCTTAGAAGCACTCCTCGGTACTCCCATAATCCTCTCGGAGA
AAAAAATCACAAGGCAACTGTGACTCCGGGAATCTCTTCTCTGATCCTTCTTCCT
10 TAATTCACTCCCACACCCAAGAAGAAATGCTTTCCAAAACCGCAAGGTAGACTG
GTTTATCCACCCACAACATCTACGAATCGTACTTCTTTAATTGATCTAATTTACAT
ATTCTGCGTGTTGTATTTCAGCACTAAAAAATGGTGGGAGCTGGGGGAGAATGAA
GACTGTTAAATGAAACCAGAAGGATATTTACTACTTTTGCATGAAAATAGAGCTT
TCAAGTACATGGCTAGCTTTTATGGCAGTTCTGGTGAATGTTCAATGGGAACTGG
15 TCACCATGAACTTTAGAGATTAACGACAAGATTTTCTACTTTTTTTAAGTGATTT
TTTGTCTTCAGCCAAACACAATATGGGCTCAGGTCACCTTTTATTTGAAATGTCAT
TTGGTGCCAGTATTTTTTAACTGCATAATAGCCTAACATGATTATTTGAACTTATT
TACACATAGTTTGAAAAAAGACAAAAAATAGTATTCAGGTGAGCAATTAGA
TTAGTATTTTCCACGTCACCTATTTATTTTTTTAAAACACAAATTCTAAAGCTACAA
20 CAAATACTACAGGCCCTTAAAGCACAGTCTGATGACACATTTGGCAGTTTAATAG
ATGTTACTCAAAGAATTTTTTAAAGAAGTGTATTTTATTTTTTAAATGGTGTTTTAT
TACAAGGGACCTTGAACATGTTTTGTATGTTAAATTCAAAGTAATGCTTCAATC
AGATAGTTCTTTTACAAGTTCAATACTGTTTTTCATGTAAATTTTGTATGAAAA
ATCAATGTCAAGTACCAAAATGTAAATGTATGTGTGTCATTTAACTCTGCCTGAGAC
25 TTTTCAGTGCACCTGTATATAGAAGTCTAAAACACACCTAAGAGAAAAAGATCGAA
TTTTTCAGATGATTCGGAAATTTTCATTCAGGTATTTGTAATAGTGACATATATAT
GTATATACATATCACCTCCTATTCTCTTAATTTTTGTGTTAAATGTAACTGGCAGT
AAGTCTTTTTTGATCATTCCTTTTCCATATAGGAAACATAATTTTGAAGTGGCCA
GATGAGTTTATCATGTGTCAGTGAAAAATAATTACCCACAAATGCCACCAGTAACTT
30 AACGATTCTTCACTTCTTGGGGTTTTTCAGTATGAACCTAACTCCCCACCCCAACAT
CTCCCTCCCACATTGTACCATTTCAAAGGGCCACAGTGACTTTTGCTGGGCATT
TTCCCAGATGTTTACAGACTGTGAGTACAGCAGAAAAATCTTTTACTAGTGTGTGT
GTGTATATATATAAACAATTGTAAATTTCTTTTAGCCATTTTTCTAGACTGTCTC
TGTGGAATATATTTGTGTGTGTGATATATGCATGTGTGTGATGGTATGTATGGATT
35 TAATCTAATCTAATAATTGTGCCCCGCAGTTGTGCCAAAGTGCATAGTCTGAGCT
AAAATCTAGGTGATTGTTTCATCATGACAACCTGCCTCAGTCCATTTTAACCTGTA
GCAACCTTCTGCATTCTATAAATCTTGTAATCATGTTACCATTACAAATGGGATAT
AAGAGGCAGCGTGAAAGCAGATGAGCTGTGGACTAGCAATATAGGGTTTTGTTT
GGTTGGTTGGTTTGATAAAGCAGTATTTGGGGTCATATTGTTTCCTGTGCTGGAG
40 CAAAAGTCATTACACTTTGAAGTATTATATTGTTCTTATCCTCAATTCAATGTGGT
GATGAAATTGCCAGGTGTCTGATATTTCTTTTCAGACTTCGCCAGACAGATTGCT
GATAATAAATTAGGTAAGATAATTTGTTGGGCCATATTTTAGGACAGGTAAAATA
ACATCAGGTTCCAGTTGCTTGAATTGCAAGGCTAAGAAGTACTGCCCTTTTGTGT
GTTAGCAGTCAAATCTATTATCCACTGGCGCATCATATGCAGTGATATATGCCT
45 ATAATATAAGCCATAGGTTTACACCATTTTGTTTAGACAATTGTCTTTTTTTCAAG
ATGCTTTGTTTCTTTTCATATGAAAAAATGCATTTTATAAATTCAGAAAGTCATA
GATTTCTGAAGGCGTCAACGTGCATTTTATTTATGGACTGGTAAGTAACTGTGGT
TTACTAGCAGGAATATTTCCAATTTCTACCTTTACTACATCTTTTCAACAAGTAAC

TTTGTAGAAATGAGCCAGAAGCCAAGGCCCTGAGTTGGCAGTGGCCCATAAGTG
TAAAATAAAAGTTTACAGAAACCTT

SEQ ID NO: 371

5 >3890 BLOOD 474320.4 U18423 g624185 Human spinal muscular atrophy gene product
mRNA, complete cds. 0
CGGGGCCCCACGCTGCGCACCCGCGGGTTTGCTATGGCGATGAGCAGCGGCGGC
AGTGGTGGCGGCGTCCCGGAGCAGGAGGATTCCGTGCTGTTCCGGCGCGGCACA
GGCCAGAGTGATGATTCTGACATTTGGGATGATACAGCACTGATAAAAGCATAT
10 GATAAAGCTGTGGCTTCATTTAAGCATGCTCTAAAGAATGGTGACATTTGTGAAA
CTTCGGGTAAACCAAAAACCACACCTAAAAGAAAACCTGCTAAGAAGAATAAAA
GCCAAAAGAAGAATACTGCAGCTTCCTTACAACAGTGGAAAGTTGGGGACAAAT
GTTCTGCCATTTGGTCAGAAGACGGTTGCATTTACCCAGCTACCATTGCTTCAATT
GATTTTAAGAGAGAAACCTGTGTTGTGGTTTACACTGGATATGGAAATAGAGAG
15 GAGCAAAATCTGTCCGATCTACTTTCCCAATCTGTGAAGTAGCTAATAATATAG
AACAGAATGCTCAAGAGAATGAAAATGAAAGCCAAGTTTCAACAGATGAAAGTG
AGAACTCCAGGTCTCCTGGAAATAAATCAGATAACATCAAGCCCAATCTGCTCC
ATGGAACCTCTTTCTCCCTCCACCACCCCCCATGCCAGGGCCAAGACTGGGACCA
GGAAAGCCAGGTCTAAAATTCAATGGCCCACCACCGCCACCGCCACCACCACCA
20 CCCCACTTACTATCATGCTGGCTGCCTCCATTTCTTCTGGACCACCAATAATTCC
CCCACCACCTCCCATATGTCCAGATTCTCTTGATGATGCTGATGCTTTGGGAAGT
ATGTTAATTTTCATGGTACATGAGTGGCTATCATACTGGCTATTATATGGGTTT
ACAAAATCAAAAAGAAGGAAGGTGCTCACATTCCTTAAATTAAGGAGAAATGCT
GGCATAGAGCAGCACTAAATGACACCACTAAAGAAACGATCAGACAGATCTGGA
25 ATGTGAAGCGTTATAGAAGATAACTGGCCTCATTTCTTCAAATATCAAGTGTTG
GGAAAGAAAAAAGGAAGTGGAATGGGTAACTCTTCTTGATTAAAAGTTATGTAA
TAACCAAATGCAATGTGAAATATTTTACTGGACTCTATTTTGAAAAACCATCTGT
AAAAGACTGAGGTGGGGGTGGGAGGCCAGCACGGTGGTGAGGCAGTTGAGAAA
ATTTGAATGTGGATTAGATTTTGAATGATATTGGATAATTATTGGTAATTTTATGA
30 GCTGTGAGAAGGGTGTGTAGTTTATAAAAGACTGTCTTAATTTGCATACTTAAG
CATTTAGGAATGAAGTGTTAGAGTGTCTTAAATGTTTCAAATGGTTTAACAAAA
TGTATGTGAGGCGTATGTGGCAAAATGTTACAGAATCTAACTGGTGGACATGGCT
GTTCAATTGTAATGTTTTTTCTATCTTCTATATGTTTAAAAGTATATAATAAAAAAT
ATTTAATTTTTTTTTTAAAAA

35

SEQ ID NO: 372

>3951 BLOOD 344496.2 AF069765 g3243032 Human signal recognition particle 72
(SRP72) mRNA, complete cds. 0
TCAGACATCTAGTGAGTCGCGAGAGCCAGGGAAGTACCACGGGCATTTTCACCC
40 CATTACCCTTCCAGCTTATTGCCGACTGCTCCCGAAGGGAGCGAAAAGGACAGG
CAAAGGGTTTCACCAAACCTTTGTAATGGGAGATTCTTGCCTTCTTACCTTTCCT
CACGTTTGCTTCTCTGCCAGAATGTCTTCCCGCACTTTCCCAAGAACCAAGTTCT
CCTAATCATCTTTCAAGATCCCTTTCCTCAACCACAGATGAGCCGTGCCTATTTT
TCCTTCAAATGACTCCCTATGGCTTCTAGTTGGTAGTCTTTTATTTACCACCTCAT
45 AGTCCTTTTATTTATATCCCATAAATGATCGTCCGGCCCCGCACCGTGGGACCAG
GACGCTGCCTCGACCATGGCGGTCTCCTGGAAACAGGCTGCTTTGAGCCGAAACT
GGTGACCGTTTCCCAACCCCGTCCAGGAGTCCGACGCCTCTTTTCTCCAGGCCAA
CTTCAAGTGAGGTGTATCAACTCTATCCGCACAAATTTCTTGCCACGAGAGCAGA
AGATTATGATCTCTGATGCTGCCTTAGGGCTGAAGACACTCCCAACTCGGCGACG

CTTAGCAATCATCGACTTCCTCCTCCTCTTGGCTGCCTCGGAGATCCTGTTCCGGG
 GCAGAGGTCTCNCCGCCCCGCCCCCTCGTCTCCTCCAAGATGGCGAGCGGCGGCA
 GCGGGGGGGGTGTCACTACCTGCGCTGTGGAGTGAAGTGAACCGGTATGGCCAGA
 ACGGCGACTTCACGCGCGCTCTCAAGACCGTCAATAAGATACTACAGATCAACA
 5 AAGATGACGTAAGTGCCTGCAATTGTAAAGTGGTATGCCTTATCCAGAATGGAAG
 TTTCAAGGAAGCTTTGAATGTCATCAATACTCACACCAAAGTGTAGCCAATAAC
 TCTCTCTCCTTTGAAAAGGCATATTGCGAGTACAGGCTGAACAGAATTGAGAATG
 CCTTGAAGACAATAGAAAAGTGCCAACCAGCAGACAGACAAAAGTGAAGGAGCTTT
 ATGGACAAGTGTATACCGTTTGGAAACGCTATGATGAATGCTTAGCAGTGTATAG
 10 AGATCTCGTCCGAAACTCCCAAGATGATTATGATGAGGAGAGGAAAACAAACCT
 TTCAGCAGTTGTTGCAGCTCAAAGCAATTGGGAAAAAGTGGTTCCAGAGAACCT
 GGGGCCTCCAAGAAGGCACACATGAGCTGTGCTACAACACTGGCATGTGCACTG
 ATAGGCCAAGGCCAGCTGAACCAGGCCATGAAAATCCTACAAAAAGCTGAAGAT
 CTTTGCCGCGCTTCATTATCAGAAGACACTGATGGGACTGAGGAAGACCCACAG
 15 GCAGAACTGGCCATCATTATGATGGTCAGATGGCTTATATTCTGCAGCTTCAGGGTC
 GAACAGAGGAGGCTTTGCAACTTTACAATCAAATAATAAACTAAAACCAACAG
 ATGTGGGATTACTAGCTGTAATTGCAAATAACATCATTACCATTAAACAAGGACCA
 AAATGTCTTTGACTCCAAGAAGAAAGTGAATTAACCAATGCGGAAGGAGTAGA
 GTTTAAGCTTTCCAAGAAACAACACTACAAGCTATAGAATTTAACAAGCTTTACTT
 20 GCTATGTACACAAACCAGGCTGAACAATGCCGCAAAATATCTGCCAGTTTACAGT
 CCCAAAGTCCCGAGCATCTCTTACCTGTGTTAATCCAAGCTGCCAGCTCTGCCG
 TGAAGAGCAGCACACAAAAGCAATAGAGCTGCTTCAGGAATTTTCAGATCAGCA
 TCCAGAAAATGCAGCTGAAATTAAGCTGACCATGGCACAGTTGAAAATTTCTCA
 AGGTAATATTTCTAAAGCATGTCTAATATTGAGAAGCATAGAGGAGTTAAAGCA
 25 TAAACCAGGCATGGTATCTGCATTAGTTACCATGTATAGCCATGAAGAAGATATT
 GATAGTGCCATTGAGGTCTTCACACAAGCTATCCAGTGGTATCAAAACCATCAGC
 CAAAATCTCCTGCTCATTGTCTTGATAAGAGAAGCTGCAAACTTCAAACCTCAA
 ATATGGGCGGAAGAAGGAGGCAATTAGTGACCTACAACAGCTGTGGAAACAAA
 ATCCAAAAGATATTCACACCCTGGCACAGCTTATTTCTGCTTACTCACTTGTAGAT
 30 CCAGAGAAAGCCAAAGCTCTTAGTAAACACTTGCCATCGTCAGATAGTATGTCTC
 TAAAAGTAGATGTTGAGGCTCTTGAAAATTCTGCTGGTGCTACATACATTTCGGAA
 GAAGGGTGGAAAAGTTACTGGAGATAGTCAACCAAAGGAACAAGGACAGGGAG
 ATTTGAAAAGAAGAAAAAGAAAAAGAAGGGAAAATTGCCTAAGAATTATGAC
 CAAAAGTTACCCAGATCCAGAAAGATGGCTGCCAATGCGAGAACGTTCTTAC
 35 TACCGGGGAAGAAAGAAGGGTAAAAAGAAGGATCAGATTGGAAAAGGGACCCA
 GGGAGCAACTGCAGGAGCTTCATCTGAACCTGGATGCCAGTAAACTGTGAGCAG
 CCCACCCACCTCCCCAAGACCTGGCAGTGCTGCAACAGTATCTGCCTCTACAAGT
 AACATCATACCCCCAAGACACCAGAAACCTGCAGGGGCTCCAGCAACAAAAAAG
 AAACAGCAACAGAAAAAGAAGAAAGGTGGAAAAGGTGGCTGGTGATGAGAATA
 40 TTCTTGTTGCAGGCTGTTTTTAACTAGTGTGAGTACACTAGGAATATAATAAA
 GGTAACACAGCAAGAAGCACAGAACTACTCCCTCTTCATCTCCATATTTTCATAA
 TTTCTTGTTGTTTCAAATAGGGAAACATCTTCCTCAAAGTCTGCCTAGTGAGATAC
 GGCTACTGGTTGCCTCATAGCTTTGTACAGATTATGAGGACTGAAAATAATTGG
 GCATTTACCCATCTTGGTATCTGTTGTATCCTTTATCTGTGTGTGCTGATTTGATCT
 45 TTTTTCAGTTTCACATACCTTATCTAAGGTTTCCCAGGATTTAAACAGAACTACT
 TCTATGATTTACAGCTGGAGTCTGAAGATACTTGTTTCTGTTCAAGTCCCACCTTAA
 ATTATGTCTTAGGAGACTGAAAGTGGAATCTTCTGAGCATTCCTAAATATCTGCT
 TAGAAATATCATGTGATAAAGAGGGACCTTCTTAATACACTGATGTTCTTCACTA
 AATGGATGGCCACAAGAAAAATAAAGTAAATGTCTTAAATAATTTAACCATAAA

TTTTCTGTCATGTGATACTGGAATATGGGATACTTTTCATGTTTATATATATNTAT
 ATATGTATATATATATACGATATATATATATATAAAACNTGAAATATATATATA
 TGGCTCCTTTGTGCCCCATGTCATTTTCAGATTATGGTAGCATGCTGATACAGCAC
 CATGAAAGAACTCAAGGAAAATATATCAATGTAAGAAGTTCACCTCTTAGACCCA
 5 GTGTTCTGAGGTCACATGGGTTTGGACTGTCTCAATCAGAAAGATTAATGACTGT
 TATCAAGAACATGAACATTGGCTTTCCTCCATAGAGAAGAAATCAGTATCTGAGTT
 GCATACCAGGCAGTATTAATAATCTAACAGGTCTGTTTGGCCCATTGATAGATACT
 CAAATGGTGTCTCCTTCTGGTTATGGATTTTGACCATTGATTACCTTTCTCAATGT
 AATGAAGTATTTTACAGTCAATTTGTGGTGTAAATGTTGCTCTTGTCTTTCTTGC
 10 TTACAAACTACTTTCACATTGAACAGCTGTGAGACAGACATATTGAGATGCCTGC
 CCTTGTTAGTATTCATTTTATGCTGCCCAAGATATCATTTAATTTAGACTTAACAA
 GTATTTCCCTTGTGATTATATTACTCTGTCCTTGTTAATAAAGTGCTGCTGTGTTG
 ACTCTGAACATACTACCAAACTTCTTCAAAGAGTTTTTTATGAAAGACTTTCCTC
 CTTTACAAGAAAGAAATGGGGTGCTGCCTTTCTGTTTAGTAAAAGCAGAATTTGC
 15 AGTGGCATCTAAAGAGATCTTTTTTAAATAAAAATTATGTATTGTGGCATAATCC
 TTTTTTTGAGCTCTACAGAGAACAGTCTTTTGGTAATAGTGGCAGGTATTTATTCC
 TTCTGAATATATACCCCATATAGGAATAACTGTTACTTATTTAGGATTCCATCAT
 TGAAAATTTTGACCCAAGGCACAGCAGTGAAATTTATAGTTCTCAATTTAGTTGT
 CATTATTGACAGGCATTGGTATTATTAGTCATTGCTAAGCAACTAAACTTCATC
 20 AGTTCAAATAAGTTTTAATTGTCAAATGAAGTATAAACACATGAACCTTCTAGAA
 ATATTTCCCTCTTTTGGGATAGGTCTTTAACCAGTTCATATATATACTTTGTCAAATA
 TATGGATGTGTATGTGTACATTTATAAGAACCAGTATGGATACATCCATTCAGTG
 TGGTACATTTTAAATAAAAATATTTTAGCAGTG
 25 SEQ ID NO: 373
 >3957 BLOOD 469133.9 U79258 g1710211 Human clone 23732 mRNA, partial cds. 0
 AACCCCTCCGGTGGGCTAGGTACTGAGCGCGCGAGGTGAGGAGTTGTGCAGGGT
 TTGGGGAAAGGAAGGCTGGCTTGGCGAGAGGGCAGGTTTGCGGGCTTTCGCCCC
 CTTTTCCAAAGACCAACAAAGAGTCCTTCCCCAACTCCCAACTCAACCCCTTTTG
 30 GAACTATGTGTGGTGGTTGGGACCCTGTGGCGCATCCTTGTGCGCTCGTGTCTTCT
 CATGCCCGGCGACGCGTCTTTGTGGTAACGCCCTGCTGCCATCTCTTTTCTTCTCT
 ATGCGAGGATTTGGACTGGCAGTGAGAATAAGAGACAACGATTCACGTCTACTT
 TCTAGGATGACTTCCATGTGCTCCATCTCGCGCGTCCCTGAGCATGTTGAATTTCC
 AAATCCTAAATAAGCCGCGCGGTGTAGTTTGTATTATGTTGCGTTTCTCTTTCTGC
 35 TTTCTCGCCCTTTCTCCATCATCCTTTAGGCTCTACAGAGTGAAGGTTTAAATCC
 AAGGTCATGGCAAAACATCTGAAGTTCATCGCCAGGACTGTGATGGTACAGGAA
 GGGAACGTGGAAAGCGCATACAGGACCCTAAACAGAATCCTCACTATGGATGGG
 CTCATTGAGGACATTAAGCATCGGCGGTATTATGAGAAGCCATGCCGCGGCGCA
 CAGAGGGAAAGCTATGAAAGGTGCCGGCGGATCTACAACATGGAAATGGCTCGC
 40 AAGATCAACTTCTTGATGCGAAAGAATCGGGCAGATCCGTGGCAGGGCTGCTGA
 GGCTGTGGGTGGGACACCCAGTGCGAAACCCTCATCCAGTTTTCTCTCCATCTC
 TTTCTTTGTACAATCCCATTTTCTATTACCATTCTCTGCAATAAACTCAAATCAC
 ATGTCTGCAAGAAGGCCTCCAAATATAGAAACAATCCATTAGTCAGCAGTGGA
 CCCTGTCTTTTATTAAGTGAAAGAAGAACTGAGTCTGAAAGTACTCTAGGAGTA
 45 GAATGGTATTTGCCAGGGACTGGAGGAGGGGGCAGTGATNNNNNNNNNNNNNNNN
 NNN
 NNN
 NNGGA
 AAATTTTTTTAATGTAGTGAAATATGTCTACCATTTCTACCCAATTTTTTTGAAT

CCCCAAGCAAAATCTTACTGAGAAAGCATCTATTACTTTTTATTAAACTGTTCCAT
GTTAGGTAGAGAGGAGAAGATGCATGTATGTATTTGGAATAAATTCTGCTTCTGA
AAACACCTATCAACCT

5 SEQ ID NO: 374

>3976 BLOOD 228434.6 U66097 g5058996 Human cell-line THP-1 GTP cyclohydrolase I
mRNA, complete cds. 0

TGTGCTCTAAAGGTGATCTAAGCAGGTCGCGTACCTTCCTCAGGTGACTCCGGCC
ACAGCCCATTGTCCGCGGCCACCGGCGGAGTTTAGCCGCAGACCTCGAAGCGCC
10 CCGGGGTCTTCCCGAACGGCAGCGGCTGCGGCGGGTCCATGGAGAAGGGCCCT
GTGCGGGCACCGGCGGAGAAGCCGCGGGGCGCCAGGTGCAGCAATGGGTTCCTCC
GAGCGGGATCCGCGCGCGGCCCGGGCCAGCAGGCCGCGGAGAAGCCCCCGCG
GCCCCGAGGCCAAGAGCGCGCAGCCCGCGGACGGCTGGAAGGGCGAGCGGCCCC
GCAGCGAGGAGGATAACGAGCTGAACCTCCCTAACCTGGCAGCCGCCTACTCGT
15 CCATCCTGAGCTCGCTGGGCGAGAACCCCCAGCGGCAAGGGCTGCTCAAGACGC
CCTGGAGGGCGGCCTCGGCCATGCAGTTCTTCACCAAGGGCTACCAGGAGACCA
TCTCAGATGTCCTAAACGATGCTATATTTGATGAAGATCATGATGAGATGGTGAT
TGTGAAGGACATAGACATGTTTTCCATGTGTGAGCATCACTTGGTTCCATTTGTTG
GAAAGGTCCATATTGGTTATCTTCCTAACAAGCAAGTCCTTGGCCTCAGCAAAC
20 TGCAGGATTGTAGAAATCTATAGTAGAAGACTACAAGTTCAGGAGCGCCTTAC
AAAACAAATTGCTGTAGCAATCACGGAAGCCTTGCGGCCTGCTGGAGTCGGGGT
AGTGGTTGAAGCAACACACATGTGTATGGTAATGCGAGGTGTACAGAAAATGAA
CAGCAAAACTGTGACCAGCACAAATGTTGGGTGFGTTCCGGGAGGATCEAAAGAC
TCGGGAAGAGTTTCTGACTCTCATTAGGAGCTGAGCTTCATTCAAGTGTGTGTGCG
25 TTGGTTGCCGATCGTACTGCCAGTAGCATTGTCTGTCTGTCCGGTCTTGTTTGTAC
ATTCCATTTTCAATTGTTACAGATGTGAACCTTTATTCCTTGTCACCTAATTATATT
AAAATTATTTCTAGGAAGTCAAATAAATAATAAAGGGTTGAGCCCTCTACTTT
CTTCTTGCCACCTTTTTGTGGCAATATTAAGTGAAGTGAAGTGTAAAGTAC
GTGCACAAAACCACTGCCAGATAACCAGAGGGGCTGGGAAGGGAGAAGAATT
30 AGTGTATTTTTTTCAAATAGTACAGTAATTTGCCTCATAAGCATAGGAGCATTGG
GAATGAGAGGGAACTGTGCCCAGTATACTGTTTTTTTTCTTCCTCCAATAAAAGT
GGTGTAGTGCCGAAAGTGCTAAAATATTTAGTGCGGTATTGCTCTGTGAATTCAA
GTTCAACAGACTTCACTTTGGTCATGTTTATTAACCAACCAAGTGACATTTAAAA
TATATTTTAGCAGTCGTAATGTTAGTCACCAAGGGAAGGTGGTGGAAATGTCTAT
35 GTTTTTGATTTTACTGTGAGTTAAAAAGGCACATTTCTACCTTCTATTGTTTTAA
ATTCAAGAATAGGGAATTAGTTCCTGGTGTGTTTACGAGTGTATTCTCGTGTCA
ACATACAGGGATTTAGACATTTAACTCTCTGTGCCTTGATAAGAATATCATTTAG
AGTGTAGATACTTTTGCCTTTTTAAAAAAGCCATTATTTTATGAGACTTAGTACTC
ACACTGCAAATAACTAGTCAGCTCAGTTTTAACTTTATAGGTTTATTGAGTTTCCT
40 TTGTGTGATCCATGTAGATGCCTCAAAATGTNNNNNNNNNNNNNNNNNNNAATC
TTATAAGATATTTTCTAAGTATTTCCAGAAACATTTGAGAGTGCCCATCATTTTC
AGGTCTGCAGAACCATAGCTTCCACGCACCTGAACGAGCACAGAATGAAGTAC
GGTGGAAAGACATTATGAGCTGTGTCCAACGTTTTAAACCAAGCGTATCGTACCAA
CGATCTGTGAAAATGCACTGGAAGCTTCTGGTCCCGGTTTCCTTTGTGGTCTATGT
45 GGGTCTTGTCTCATTGTAACCTCCGTATAGATGGTATAGGTATTTTAATCCTGGAA
GCTGTTGCCTTATTAATGATTATCTTAAAATTTCTCCATGGGGCAGCGTGGGCC
AAATTAACAAACAAACAAACCGCAACTCCTCCACAGAAACACAAACACAGTTATT
CCATGAAGTTTAGTATTTGGTTGACATAGTGCTCTTCAAATTCATCCCATACCCT
AAAAGTAATAACTTTGATGCTTGCTTTAACTTTAGTCCCATCTCTGCCACTTTGAT

GCTATTTGGGTTATGATGGGGCAAGATGGCAGAGGTATTGGGTTTTTTTGTTTTTT
TCCATTCCTCTCTACTTCTGTTTCCTAGCTTTTTCTTTCTGGAGTTTAAGTACAGTG
ATGGTTGGCTTGAGTACCTTTTTAAATCTAGCCCAGTATAAACATTAGCCTGCTTA
ATATTTAGACATTTATAGGTAGAATTCTGAGCACTCAACTCATGTTTGGCATTTTA
5 AAGTAAAAACAAGTGTGACTTCGAGGACCAAAGAAATTGTCAGCTATACATTTA
TCTTTATGAACCTCATTTATATTCCTTTTTAATGACTCGTTGTTCTAACATTTCCTAG
AAGTGTTCCTTATAAAGGTCTAATGTATCCACAGGCTGTTGTCTTATTAGTAAATG
CAAAGTAATGACTTTGTCTGTTTTACTCTAGTCTTTAGTACTTCAAAATTACCTTT
TCATATCCATGATCTTGAGTCCATTTGGGGGATTTTTAAGAATTTGATGTATTTCA
10 ATACACTGTTCAAAATTAAATTGTTTAATTTTATGTATGAGTATGTATGTTCCCTGA
AGTTGGTCCTATTTAAATTATTAAACTATTGTAACCTTTG

SEQ ID NO: 375

>4133 BLOOD 331022.43 U20938 g1926407 Human lymphocyte dihydropyrimidine
dehydrogenase mRNA, complete cds. 0

15 GAAAATGTATCCAAGGAAACATTTTATCATTAAAAATTACCTTTAATTTTAATGC
TGTTTCTAAGAAAATGTAGTTAGCTCCATAAAGTACAAATGAAGAAAGTCAAAA
AATTATTTGCTATGGCAGGATAAGAAAGCCTAAAATTGAGTTTGTAGAACTTTAT
TAAGTAAAATCCCCTTCGCTGAAATTGCTTATTTTTGGTGTGATAGAGGATAG
20 GGAGAATATTTACTAACTAAATACCATTCACTACTCATGCGTGAGATGGGTGTAC
AAACTCATCCTCTTTAATGGCATTCTCTTTAACTATGTTCCCTAACAAAATGAG
ATGATAGGATAGATCCTGGTTACCACCTCTTTTGCTGTGCACATACGGGGCTCTGAC
TGGTTTTAATAGTCACCTTCATGATTATAGGAACTAATGTTTGAACAAAGCTCAA
AGTATGCAATGCTTCATTATTCAAGAATGAAAAATATAATGTTGATAATATATAT
25 TAAGTGTGCCAAATCAGTTTGACTAETCTCTGTTTTAGTGTATTATGTTTAAAAGAA
ATATATTTTTTGTATTATTATTAGATAATATTTTTGTATTTCTCTATTTTCATAATCAG
TAAATAGTGTATATAAACTCATTTATCTCCTCTTCATGGCATCTTCAATATGAAT
CTATAAGTAGTAAATCAGAAAGTAACAATCTATGGCTTATTTCTATGACAAATTC
AAGAGCTAGAAAAATAAAATGTTTCATTATGCACTTTTAGAAATGCATATTTGCC
30 ACAAACCTGTATTACTGAATAATATCAAATAAAATATCATAAAGCATTTT

SEQ ID NO: 376

>4152 BLOOD 399962.1 AL137305 g6807770 Human mRNA; cDNA DKFZp434J197
(from clone DKFZp434J197). 3e-09

35 GCCTCGGTGTTCCACCTAGGGGCGGGCAGCCAGGGGCACTTCCGCTGGCCCAA
GTGATCTGCATGTGGCAGGGCTGCGCAGTGTGAGCGGCCAGTGGGCAGGATGAC
GAGCCAGACCCCTCTGCCCCAGTCCCCCGGCCAGGCGGCCGACGATGTCTACT
GTTGTGGAGCTGAACGTGCGGGGTGAGTTCCACACCACCACCCTGGGTACCCTGA
GGAAGTTTCCGGGCTCAAAGCTGGCAGAGATGTTCTCTAGCTTAGCCAAGGCCTC
40 CACGGACGCGGAGGGCCGCTTCTTCATCGACCGCCCCAGCACCTATTTCAAGCCC
ATCCTGGACTACCTGCGCACTGGGCAAGTGCCACACAGCACATCCCTGAAGTGT
ACCGTGAGGCTCAGTTCTACGAAATCAAGCCTTTGGTCAAGCTGCTGGAGGACAT
GCCACAGATCTTTGGTGAGCATGGTGTCTCGGAAGCAGTTTTTGTGCAAGTGCC
GGGCTACAGCGAGAACCTGGAGCTCATGGTGCGCCTGGCACGTGCAGAAGCCAT
45 AACAGCACGGAAGTCCAGCGTGCTTGTGTCTTGGTGGAACTGAGGAGCAGGAT
GCATATTATTCAGAGGTCCTGTGTTTTCTGCAGGATAAGAAGATGTTCAAGTCTG
TTGTCAAGTTTGGGCCCTGGAAGGCGGTCTAGACAACAGCGACCTCATGCACTG
CCTGGAGATGGACATTAAGGCCCGAGGGGTACAAGGTATTCTCCAAGTTCTACCTG
ACGTACCCACCAAAGAAACGAATTCCATTTTAACATTTATTCAATTCACCTTCA

CCTGGTGGTGATCCTCAGGAGCAGAGACTGTTATGAATTCTGGCGTGGCTTATGA
 AATTAAGGTTGCCATCAAAGCCATTTTCTTTTAATTTACAAACATCAGGCAAT
 TTCCAGGGTTGGTCTAGAGTCTTGCCACTAAATATTGATCACTCGTTTAAGGACTT
 TCCACTCCATTGCAACTGATGCCACTATATTTGCCTAGCAACTTGCAGCTACTTCC
 5 TTTTCAAAGCCTCATGTATCTCCCAGACCCTTCTCTTGAAGTCCAATAACAAGAC
 CAAGTAAGAATGTTTCAACAATGCGTTGGCAAGAGATGTGAGATGACAACAGGA
 ACATACAAGATACTGTGAATCTAGATGTTCTGACCTAAAGATGTAGTCTACATAG
 CCCCAGCTTGGGGTCCAATCCATCTGTCCCTGGCATGTGCCTTCATGTAGTAGGT
 GCTTTCCTGATCCCCCTTTCGAGATGCTGTGGGTGCTAACACCTCAGAGCTGTCCT
 10 CTTCTCTAGAGTGGAGGTTTCAAAGTGCATCATCAGCATTACCTGTGAACTTGC
 TGGAAATACAAATCCTCAGGCCCCACCTCAGACCTACTGAATCAGAATCTCTGGG
 GGTGGGCACAGCATTCTGATTTACCAAACCCTCCAAGTGATTTTGTATGTATTCT
 AATTTTGAGACCATCTCTAGAAAAGAATTGCTACCTCTTGATGGAGGTACAAAA
 GACTGACCTCTTACATCAAGGAACCTTCCCTTCCCAGAGCTCCTCATGGAATCAAG
 15 CTGAAGTCAGTCTTCTCTGAGAGCACATTCTTACTCAGTTTTTTTCCCTCTGTCT
 ACGCTGCTTCCCTCACTCCCCTTCTCCTAAGAGCACTCCATCAATAAACCACTTGC
 ACGAG

SEQ ID NO: 377

20 >4181 BLOOD 350387.28 Z27113 g415387 Human gene for RNA polymerase II subunit
 14.4 kD. 0

GGGTTACGGCGCAGGCGCAAGATAAGCTAGGAGCCGCGCGAGTCGTAGTGTCCG
 TGTGTTGCGGGTCTCCGCGCGGGGACCGGGGCGCAGCGGGGTGCTGAGGCGAGGG
 TGTTCATGTCAGACAACGAGGACAATTTTGATGGCGACGACTTTGATGATGTGGAG
 25 GAGGATGAAGGGCTAGATGACTTGGAGAATGCCGAAGAGGAAGGCCAGGAGAA
 TGTCGAGATCCTCCCCTCTGGGGAGCGACCGCAGGCCAACCAGAAGCGAATCAC
 CACACCATAACATGACCAAGTACGAGCGAGCCCGCGTGCTGGGCACCCGAGCGCT
 CCAGATTGCGATGTGTGCCCTGTGATGGTGGAGCTGGAGGGGGAGACAGATCC
 TCTGCTCATTGCCATGAAGGAACCTCAAGGCCCGAAAGATCCCCATCATCATTCCG
 30 CGTTACCTGCCAGATGGGAGCTATGAAGACTGGGGGGTGGACGAGCTCATCATC
 ACCGACTGAGCTGGAGTCATCTTCCTGCCCTTGCCCCATGCCCAATTTTTCATTCTC
 ACTTTATATGTGTAAATAATAAAATATTCAACTTTCCAAAAAAAAAAAAAAAAAGGG

SEQ ID NO: 378

35 >4191 BLOOD Hs.171495 gnl|UG|Hs#S4798 Human hap mRNA encoding a DNA-binding
 hormone receptor /cds=(321,1667) /gb=Y00291 /gi=32025 /ug=Hs.171495 /len=2972
 CGGGGTAGGATCCGGAACCCATTCGGAAGGCTTTTTGCAAGCATTACTTGGAAG
 GAGAACTTGGGATCTTTCTGGGAACCCCCCGCCCGGCTGGATTGGCCGAGCAA
 GCCTGGAAAATGGTAAATGATCATTGATCAATTACAGGCTTTTAGCTGGCTTG
 40 TCTGTCATAATTCATGATTCGGGGCTGGGAAAAAGACCAACAGCCTACGTGCCA
 AAAAAGGGGCGAGATTTGATGGAGTTGGGTGGACTTTTCTATGCCATTTGCCTCC
 ACACCTAGAGGATAAGCACTTTTGCAGACATTCAAGTGAAGGGAGATCATGTTTG
 ACTGTATGGATGTTCTGTGAGTGCCTGGGCAAATCCTGGATTTCTACACTGC
 GAGTCCGTCTTCTGTCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGA
 45 TTGACCCAAACCGAATGGCAGCATCGGCACACTGCTCAATCAATTGAAACACAG
 AGCACCAGCTCTGAGGAACTCGTCCCAAGCCCCCATCTCCACTTCTCCCCCTC
 GAGTGTACAAACCCTGCTTCGTCTGCCAGGACAAATCATCAGGGTACCACTATGG
 GGTGAGCGCCTGTGAGGGATGTAAGGGCTTTTTCCGCAGAAGTATTCAGAAGAA
 TATGATTTACACTTGTACCGAGATAAGAACTGTGTTATTAATAAAGTCACCAGG

AATCGATGCCAATACTGTCGACTCCAGAAGTGCTTTGAAGTGGGAATGTCCAAA
 GAATCTGTCAGGAATGACAGGAACAAGAAAAAGAAGGAGACTTTCGAAGCAAGA
 ATGCACAGAGAGCTATGAAATGACAGCTGAGTTGGACGATCTCACAGAGAAGAT
 CCGAAAAGCTCACCAGGAACTTTCCCTTCACTCTGCCAGCTGGCTAAATACACC
 5 ACGAATTCCAGTGCTGACCATCGAGTCCGACTGGACCTGGGCCTCTGGGACAAAT
 TCAGTGAAGTGGCCACCAAGTGCATTATTAAGATCGTGGAGTTTGCTAAACGTCT
 GCCTGGTTTCACTGGCTTGACCATCGCAGACCAAATTACCCTGCTGAAGGCCGCC
 TGCCTGGACATCCTGATTCTTAGAATTTGCACCAGGTATACCCCAAGACA
 CCATGACTTTCTCAGACGGCCTTACCCTAAATCGAACTCAGATGCACAATGCTGG
 10 ATTTGGTCTCTGACTGACCTTGTGTTACCTTTGCCAACCAGCTCCTGCCTTTGG
 AAATGGATGACACAGAAACAGGCCTTCTCAGTGCCATCTGCTTAATCTGTGGAGA
 CCGCCAGGACCTTGAGGAACCGACAAAAGTAGATAAGCTACAAGAACCATTGCT
 GGAAGCACTAAAAATTTATATCAGAAAAAGACGACCCAGCAAGCCTCACATGTT
 TCCAAAGATCTTAATGAAAATCACAGATCTCCGTAGCATCAGTGCTAAAGGTGCA
 15 GAGCGTGTAATTACCTTGAAAATGGAAATTCCTGGATCAATGCCACCTCTCATTC
 AAGAAATGATGGAGAATTCTGAAGGACATGAACCCTTGACCCCAAGTTCAAGTG
 GGAACACAGCAGAGCACAGTCTTAGCATCTCACCCAGCTCAGTGGAACACAGTG
 GGGTCAGTCAGTCACCACTCGTGCAATAAGACATTTTCTAGCTACTTCAAACATT
 CCCCAGTACCTTCAGTTCCAGGATTTAAAATGCAAGAAAAAACATTTTTACTGCT
 20 GCTTAGTTTTTGGACTGAAAAGATATTAAACTCAAGAAGGACCAAGAAGTTTTTC
 ATATGTATCAATATATATACTCCTCACTGTGTAACCTACCTAGAAATACAACTTT
 TCCAATTTTAAAAAATCAGCCATTTTCATGCAACCAGAACTAGTTAAAAGCTTGT
 ATTTTCCTCTTTGAACACTCAAGATGCATGGCAAAGACCCAGTCAAAATGATTTA
 CCCCTGGTTAAGTTTCTGAAGACTTTGTACATACAGAAGTATGGCTCTGTTCTTTC
 25 TATACTGTATGTTTGGTGCTTTCCTTTTGTCTTGCATACTCAAAATAACCATGACA
 CCAAGGTTATGAAATAGACTACTGTACACGTCTACCTAGGTTCAAAAAGATAACT
 GTCTTGCTTTCATGGAATAGTCAAGACATCAAGGTAAGGAAACAGGACTATTGA
 CAGGACTATTGTACAGTATGACAAGATAAGGCTGAAGATATTCTACTTTAGTTAG
 TATGGAAGCTTGTCTTTGCTCTTTCTGATGCTCTCAAACCTGCATCTTTTATTTTCATG
 30 TTGCCCAGTAAAAGTATACAAATTCCCTGCACTAGCAGAAGAGAATTCTGTATCA
 GTGTAACCTGCCAGTTCAGTTAATCAAATGTCATTTGTTCAATTGTTAATGTCACCT
 TAAATTAAGTGGTTTATTACTTGTTAATGACATAACTACACAGTTAGTTAAA
 AAAAATTTTTTTACAGTAATGATAGCCTCCAAGGCAGAAACACTTTTCAGTGTTA
 AGTTTTTGTACTTGTTCACAAGCCATTAGGGAAATTTTCATGGGATAATTAGCA
 35 GGCTGGTCTACCACTGGACCATGTAACCTCTAGTGCTCCTTCCCTGATTCATGCCTGAT
 ATTGGGATTTTTTTTCCAGCCCTTCTTGATGCCAAGGGCTAATTATATTACATCCCA
 AAGAAACAGGCATAGAATCTGCCTCCTTTGACCTTGTTCAATCACTATGAAGCAG
 AGTGAAAGCTGTGGTAGAGTGGTTAACAGATACAAGTGTCAGTTTCTTAGTTCTC
 ATTTAAGCACTACTGGAATTTTTTTTTTTTGATATATTAGCAAGTCTGTGATGTACT
 40 TTCCTGGCTCTGTTTGTACATTGAGATTGTTTGTGTTAACAATGCTTTCTATGTTT
 ATATACTGTTTACCTTTTTCCATGGACTCTCCTGGCAAAGAATAAAATATATTTAT
 TTT

SEQ ID NO: 379

45 >4215 BLOOD 237648.6 AF006305 g2213931 Human 26S proteasome regulatory subunit
 (SUG2) mRNA, complete cds. 0
 CATGGACAGGTCCAGGTACTCCTGGTTGGAGTCACAGGCCACGATGCGGTCCAG
 GTCTTCCACCAGCTGCTTGAAGGTGGGTCTCTGTGAGGGCACTGCATGCCAGCAG
 TCCCGCATCATCATGTACAGCTCGTTGGTGCAGTTACTGGGCTTCTCATCATGGC

GGACCCTAGAGATAAGGCGCTTCAGGACTACCGCAAGAAGTTGCTTGAACACAA
 GGAGATCGACGGCCGCTTAAGGAGTTAAGGGAACAATTAAAAGAACTTACCAA
 GCAGTATGAAAAGTCTGAAAATGATCTGAAGGCCCTACAGAGTGTTGGGCAGAT
 CGTGGGTGAAGTGCTTAAACAGTTAACTGAAGAAAAATTTCATTGTTAAAGCTACC
 5 AATGGACCAAGATATGTTGTGGGTTGTCTGTCGACAGCTTGACAAAAGTAAGCTG
 AAGCCAGGAACAAGAGTTGCTTTGGATATGACTACACTAACTATCATGAGATATT
 TGCCGAGAGAGGTGGATCCACTGGTTTATAACATGTCTCATGAGGACCCTGGGA
 ATGTTTCTTATTCTGAGATTGGAGGGCTATCAGAACAGATCCGGGAATTAAGAGA
 GGTGATAGAATTACCTCTTACAAACCCAGAGTTATTTTCAGCGTGTTAGGAATAATA
 10 CCTCCAAAAGGCTGTTTGTATATGGACCACCAGGTACGGGAAAAACACTCTTGG
 CACGAGCCGTTGCTAGCCAGCTGGACTGCAATTTCTTAAAGGTTGTATCTAGTTC
 TATTGTAGACAAGTACATTGGTGAAAGTGCTCGTTTGATCAGAGAAATGTTTAAT
 TATGCTAGAGATCATCAACCATGCATCATTTTTATGGATGAAATAGATGCTATTG
 GTGGTCGTCGGTTTTCTGAGGGTACTTCAGCTGACAGAGAGATTTCAGAGAACGTT
 15 AATGGAGTTACTGAATCAAATGGATGGATTTGATACTCTGCATAGAGTTAAAATG
 ATCATGGCTACAAACAGACCAGATACACTGGATCCTGCTTTGCTGCGTCCAGGAA
 GATTAGATAGAAAAATACATATTGATTTGCCAAATGAACAAGCAAGATTAGACA
 TACTGAAAATCCATGCAGGTCCCATTACAAAGCATGGTGAAATAGATTATGAAG
 CAATTGTGAAGCTTTCGGATGGCTTTAATGGAGCAGATCTGAGAAATGTTTGTAC
 20 TGAAGCAGGTATGTTTCGCAATTCGTGCTGATCATGATTTTGTAGTACAGGAAGAC
 TTCATGAAAGCAGTCAGAAAAGTGGCTGATTCTAAGAAGCTGGAGTCTAAATTG
 GACTACAAACCTGTGTAATTTACTGTAAGATTTTGTATGGCTGCATGACAGATGT
 TGGCTTATTGTAAAAATAAAGTTAAAGAAAAATAATGTATGTATTGGTAATGATGT
 CATTAAAAGTATATGAATAAAAAATATGAGTAACATCATAAAAAATTAGTAATTCA
 25 ACTTTTAAAGATACAGAAGAAATTTGTATGTTTGTAAAGTTGCATTTATTGCAGC
 AAGTTACAAAGGGAAAGTGTTGAAGCTTTTCATATTTGCTGCGTGAGCATTTTGT
 AAAATATTGAAAGTGGTTTGAGATAGTGGTATAAGAAAGCATTTCCTATGACTTA
 TTTTGTATCATTTGTTTTCTCATCTAAAAAGTTGAATAAAATCTGTTTGATTGAG
 TTCTCCTACAAAAAAGTCATAAGAAATGCTTTCTTATACCACTATCTCAAACCA
 30 CTTTCAATATTTTACAAAATGCTCACGCAGCAAATATGAAAAGCTTCAACACTTT
 CCCTTTGTAAGTTGCTGCAATAAATGCAACTTTAACAAACATACAAATTTCTTCTG
 TATCTTAAAAGTTGAATTACTAATTTTAA

SEQ ID NO: 380

35 >4222 BLOOD 1099671.1 X71901 g483524 Human ERF-1 mRNA 3' end. 0
 CGCGATCTAGAACCCAAACCTAACAGTATATATTTTATCATTTTCAAGGGAGTCA
 TGCTCCATTGCGGGGCCCTTCGGTTTCGTGGCTCCCATGTCCCCCTCTCCACCTCCC
 GCCAAAACGGCGCAGCGTGACAAGCCATATGTTCCACTCCGGTGGGGGCGAGAG
 AGAAGCAACAATAAGTTAAAAGTGCCGCCTCCCTCCACCTCTTTACCTTCATTCT
 40 TACCAAAGTAACCTTTTTTTCATTGTTCTAGAGTCTTGAGGTGTGTGTGGGGAGGA
 TGGAGGAGGAGGGAGGGTTGTGGCGCCGCCAGAATTCGGAGCGCGCGTGGA
 AGTAGTGAGTTGCTCGGTGGGCTTTTTCTGGGAGGAAGGGGCATTCAGGAAGGA
 TTAGGGTTTTCTTGACTAAAAAGTTTAAAGATTGGATGCGTGAAAAGAAACGGC
 ACGCCTAGGCCTGGTAAAACAAACAATCGTCCCGGGTTGTGGTCTTTTTTTTTCG
 45 GCGCCCCCACC CGCCACACCCGGAGAGCGCCGGCTGCAAAGCGAGCGCGAGT
 GTCGACGCGTGCGACGCACTAAATTGTGCCGCGCTCGCGCCCCGCCAGACCATGT
 CCTCCTGGGGAAAAAGTTTCCCTAGTCCCCCAGCACCGCGCCCCACCCTACGCC
 CCGCTGGAAAAAAAACAGCAACATAAAATCCTAGGCTTGAACATTCTGTGCGTC
 CCAAATTTCTAATGTCTCGGCCTGCCCGGTTTGCCGAAGGGAGCCGAGTGTCTGA

AGAGAAGTCGGGTAAAGGTAAGTTGTGCAGACACTTGGGGAAGTTTCAAGGAGA
CCGCCAGCTCAAGATGGAAACCGCGGGCCCGGGCGCTAAGGACGGGCTTCAGCTC
CCGCTGGCAAAAAGAGAAAAGTCGAGCCCGCCTTCCTGCCCAACAAAAACAACA
ACATGACAACAAGAACCCCGGAGGGAGTGGAATGAGTGACGTCACAGCCGCGCT
5 CTGAGGGCTGACAAAGGAGGGGGCGCGCCCTCCCGCTCTGCGCCCGCGCGGCC
CGGAGAGGGGGCGCCTGAAGCGCCGGGTAGGGAAGTCAGCCGACTTGAACTTT
TCCTCTNNNNNNNNNNNNNNNNNNNGTTGTGCGCGGCTCACAGTGGGGTTTT
TTTTTTTTCCGCCTTCTTTTCTCGTCTCCCTCCCCCTTCTTCCTTTTGAAAGTTTCTT
CTCCTCCCCCTGCCCCCCTCCCCGCTGACCGCATGGCTGATTCAACTCCAGTGT
10 CAATCAACTTCTTTTTCTCCTCTTCTCATTAAATAAGTTTAAAGCTCCTCCTCC
CCCCGGCCACCAAATCTGAACCTTATAAATTGGGCTTTGCGCGCCCCAGCCCGG
AGTCAGAAAGGCGAGGGGGCGCCGGGAAGTGGCGTGTGGGACTCCAGACAGGAG
AGGCTGCGCCTTCCCCGCACCGGGACCTTCGCGACACACCAGATCCTCGCCCCTG
GCTCGCGCGAACGCACAGGATGACCACCACCCTCGTGTCTGCCACCATCTTCGAC
15 TTGAGCGAAGTTTTATGCAAGGTAAAGGGGGGCGGAGCATTGTCTTTCAAAAA
GTCTTTTTCTTTTGCCTTAAGAAAGAACCCCCAAAAGTTTGGGTCTTGGAAGGCA
ATGGGGAAAGTGGTGCAGCGAGATGATTCTTTTCTCCTCCGGCATTCTCCCAAG
TTTGAAGGAATTTGGCCCCGTCCTTCCCACCCTTTGAGTTTCAACAGTTGCTGGCG
GGGATTACATGTGAATCTGGAGGCCAGGGTTTTGAGGGGCGAAGTTTGCCTGGC
20 AGGGCAGCCCGGGGGCTTCGGGGGGAGGGCTGGGATTGGGACAAGTTTGGGCG
ATCCTGTTTTACGTAACGTGCTGCTGGATCCCAGGTTTGCTGGTCTGATCGGGTTC
CCAGTCTGCGCCCTAGGTCTGCGGAGCGGCATTACCCACCCGTGGGGTGGGAGT
GGGAGGTCCCTCGGGGAAGTGAGTCTCGGGACAATGTTTTCTCCACTCTTTGGG
GGGAGCTGGGGATATGCGAGGAAGAAAGGCCAAGTTGTGATTCAAAAAGATGTT
25 GCAGAACAAGTTTGCAGTGGGGCTTGAGTCCGCCCTAGCTCCGTTGGGCTTCTTC
CCGCGATAGCCGATCGTGCAGCAAACCTTTGGGGTGAAAGAGGCATTCAGGTTGA
CCCGCTTACCTGTGTTGCCGAGGCATTGCGGCTCATCGATTGCGGGCGGGGTGG
GGGGGGAGGTGGCGACAAAATGCTGGCTTGAACCTCGAGAGTCCCGCGAGTAAGG
ATTTAATGGGGGCCTCCTTAAAACATGTTGCTTGTGAGCCAGTGTTGAAAAAGCA
30 AGTTTTAAACTCGGAATGTTCCAGGACTGCGGTTTAAATGTACATAGCAAAAGTC
TATGGATGTTGTTAAATTTCTTTCCAACCTCCCCCTCCCAATTTGAAAGGGTGAAG
CTGCTGGGCTACTTTTTAATTGCTGAAGTGTTTTGCCTTCTCCAGCCAGGAGCTGG
CAAGCCTCTTTGCCCCTAGCATGGGGCTGCCCCGGGGGTGGCTCCCCGACCACCTT
CCTCTTCCGGCCCATGTCCGAGTCCCTCACATGTTTGACTCTCCCCCAGCCCTC
35 AGGATTCTCTCTCGGACCAGGAGGGCTACCTGAGCAGCTCCAGCAGCAGCCACA
GTGGCTCAGACTCCCCGACCTTGGACAACCTCAAGACGCCTGCCCATCTTCAGCAG
ACTTTCCATCTCAGATGACTAAGCCAGGGTAGGGAGGGACCTCCTGCCTACTCCA
GCCCTACCCTGCACCCACATCCCATACCCTCTTCTCCCTACCCATCCCATCCCC
ACAGGCCCTACATTAACAAGGTTAAGCTCAACCCCTTTCCCCCAGCACCTCAGAA
40 TGTGCCCTCCCTCTCCCCCTCATAACCCACCTAACATAAGGACAAGTCAATTTG
TCAGTAGCTTCTTCTGGCTTGAAACCCCTCCCTGGGATTTTATAGCCCACTTACC
ATGCATAACAGACAAGTCCCATATTTTGTGAGTAGATGCCTTTTTTTTTCCGGCTT
AAGCCTTAAGTGCCAAATCACAAGAGAAAAAGCAGTAACAGTTTACAGAAGCAA
CTTAGTGCTTGTAAATCTAACTTTGTCACTGTGACTACATTACCTCTTCAGCGCCA
45 GAGGGCACCCGTGGGCCTCCCGGAGCCTCTGCCCATGGCGGGGTGGAGACCCGG
AACCAGCAGCCCCCTCCACTGGCGACACAACTGCACCTTCCCTCATTTAGTCTC
CCGCACACTTATTCCTCCTCCCTCTTCCCGGTGGCACCTCTCCACCTGTACCCGC
CCCCGCCCCACCACCCCGGCCCTTGGAAGAGTTGTTGCCAGACCAGGGTTTTGG
GGGAAACCTGTCTTGACATTCAAAACCTTTTTCTTCCCGATCTGAACCCCTGTTGA

CTAATCTTGCCTGGGTTTGTGTAGGTCTGCAGGAAGGAAGGCTGAAAAAGCGGA
 CGAAGATTTTGACTTAAGTGGGACTTTGTGATTAAATTTTTCTTTTTTTAAGTG
 GGGAGGAAGGGGAAGCTAGATGGACTAGGAGAGACTTGATTTTGGTGCTAAAGT
 TCCCCAGTTCATATGTGACATCTTTTTAAAAAAAATAACAACAAAAAAAATG
 5 AGAGAAAAGCTAAAAAAAAGTAAGGGGTGAGCAGTTAATGGTATTCATTC
 CACATACAATATCTGTGTAAAACGATTTCTGTAGAAGTAGCTTTAATGGTTTTT
 GCTCTAGAATAACCGTAGGTCTATCCTTAGAGCACTCACGCCATGCTTCTTCCCTG
 GGTTTTAAACTTCATATAACTTTTCAAGAAATTGGAGAGCAAAAATTTTGCTTGTC
 CTGCACATCAATATAAAAAAGCTTATTTAACTTATCAAAACGTATTTATTGCCAA
 10 ACTATGCTTTTTTTTGTAAATTTTGTTCATATTTATCGGGATGACAAATCCATAGA
 ATATATTCTTTTATGTAAATTATGATCTTCATATTAATCTTAAAATTTTGTGACG
 TGTCTTTTTCTTTTTTTCCACAGTTTAAATATATTATTCTTCAACGACATTTTTTG
 TAACTTTACACTTTTTTGGTTATTTTATTTTAAAAAAAATGAAAAATTAATTTAAA
 AAAATGCAAAAAACTGTTGGATTATTTATTTTAGAAATCCCCCTTTGTGTTGG
 15 ACTGCAAATTGAGTTTCTTTCTTTTAGGCCTTTCACAAGTAGGACTGAGAATGTA
 TGTAAGAGTTCTGTGACAGTACAGAAGGAAAACAACCTTTTATGTATAGCTTCTA
 AAAGGGGAAAAAAAAGAGAAACCTTTGACTTCCACGTGCCCATCTCA
 AGACATTCCACTCACAGATTTGAGGTTCTGGATTCCAGGTCTGGAGTTTCCAAT
 GTTAATGTAAACAGAACTGGCACACACACATTAAGATGAATGTAATTATTATTC
 20 TCTTGCTGGTCACTACCGTCGCTTTCTATTTCTTTCTTTGTGTGAATTTATTTAA
 AAGAAAAAAAACCTTTTTGTAACGACTATTTGCAGTTTAAAAATCAATAAACCCC
 GTTTTTTCAAGAAACAAA

SEQ ID NO: 381
 25 >4336 BLOOD 992306.1 X51521 g31282 Human mRNA for ezrin. 0:

CCATCTTTGTATATTTACATGCTTAGAGGGGTGAAAATTATTTTGGAAATTGAGT
 CTGAAGCACTCTCGCACACACAGTGATTCCCTCCTCCCGTCACTCCACGCAGCTG
 GCAGAGAGCACAGTGATCACCAGCGTGAGTGGTGGAGGAGGACACTTGATATT
 TTTTATGTTTTTTTTTTTGGCTTAACAGTTTATAGAATACATTGTACTTATACACC
 30 TTATTAATGATCAGCTATATACTATTTATATACAAGTGATAATACAGATTTGTAA
 CATTAGTTTTAAAAAGGGAAAGTTTTGTTCTGTATATTTTGTACCTTTTACAGAA
 TAAAAGAATTACATATGAAAAACCTCTAAACCATGGCACTTGATGTGATGTGGC
 AGGAGGGCAGTGGTGGAGCTGGACCTGCCTGCTGCAGTCACGTGTAAACAGGAT
 TATTATTAGTGTTTTATGCATGTAATGGACTATGCACACTTTTAATTTGTGAGAT
 35 TCACACATGCCACTATGAGCTTTCAGACTCCAGCTGTGAAGAGACTCTGTTTGCT
 TGTGTTTGTGTCAGTCTCTCTGCCATGGCCTTGGCAGGCTGCTGGAAGGCAG
 CTTGTGGAGGCCGTTGGTTCCGCCCACTCATTCCTTCTCGTGCACTGCTTCTCCT
 TCACAGCTAAGATGCCATGTGCAGGTGGATTCCATGCCGCAGACATGAAATAAA
 AGCTTTG

40
 SEQ ID NO: 382
 >4365 BLOOD 198264.2 D42039 g577290 Human mRNA for KIAA0081 gene, partial cds.
 0

GGAGGCGGGGCCTCGGAAAGGCGGACAGGAAGGCGTGTGCAAGGCGGGGTCCG
 45 GCCCGCGCAGGTCGGGTAAGCGCGTCTAGGGCGCTGCGCGGCGCAGCGAAAATG
 GCGGCTTCCAGGTGGGCGCGCAAGGCCGTGGTCCTGCTTTGTGCCTCTGACCTGC
 TGCTGCTGCTGCTACTGCTACCACCGCCTGGGTCTGCGCGGCCGAAGGCTCGCC
 CGGGGACGCCCGACGAGTCTACCCACCTCCCCGGAAGAAGAAGAAGGATATTC
 GCGATTACAATGATGCAGACATGGCGCGTCTTCTGGAGCAATGGGAGAAAGATG

ATGACATTGAAGAAGGAGATCTTCCAGAGCACAAGAGACCTTCAGCACCTGTGCG
 ACTTCTCAAAGATAGACCCAAGCAAGCCTGAAAGCATATTGAAAATGACGAAAA
 AAGGGAAGACTCTCATGATGTTTGTCACTGTATCAGGAAGCCCTACTGAGAAGG
 AGACAGAGGAAATTACGAGCCTCTGGCAGGGCAGCCTTTTCAATGCCAACTATG
 5 ACGTCCAGAGGTTTATTGTGGGATCAGACCGTGCTATCTTCATGCTTCGCGATGG
 GAGCTACGCCTGGGAGATCAAGGACTTTTTGGTCTGGTCAAGACAGGTGTGCTGAT
 GTAACCTCTGGAGGGCCAGGTGTACCCCGGCAAAGGAGGAGGAAGCAAAGAGAA
 AAATAAAACAAAGCAAGACAAGGGCAAAAAAAGAAGGAAGGAGATCTGAAAT
 CTCGGTCTTCCAAGGAAGAAAATCGAGCTGGGAATAAAAGAGAAGACCTGTGAT
 10 GGGGCAGCAGTGACGCGCTGTGGGGGGACAGGTGGACGTGGAGAGCTCTTTGCC
 CAGCTCCTGGGGTGGGAGTGGTCTCAGGCAACTGCACACCGGATGACATTCTAGT
 GTCTTCTAGAAAGGGTCTGCCACATGACCAGTTTGTGGTCAAAGAATTACTGCTT
 AATAGGCTTCAAGTAAGAAGACAGATGTTTTCTAATTAATACTGGACACTGACAA
 ATTCATGTTTACTATAAAATCTCCTTACATGGAAATGTGACTGTGTTGCTTTTTCC
 15 CATTTACACTTGGTGAGTCATCAACTCTACTGAGATTCCACTCCCCTCCAAGCAC
 CTGCTGTGATTGGGTGGCCTGCTCTGATCAGATAGCAAATTCTGATCAGAGAAGA
 CTTTAAACTCTTGACTTAATTGAGTAACTCTTCATGCCATATACATCATTTTCA
 TTATGTTAAAGGTAAAATATGCTTTGTGAACTCAGATGTCTGTAGCCAGGAAGCC
 AGGGTGTGTAAATCCAAAATCTATGCAGGAAATGCGGAGAATAGAAAATATGTC
 20 ACTTGAAATCCTAAGTAGTTTTGAATTTCTTTGACTTGAATCTTACTCATCAGTAA
 GAGAACTCTTGGTGTCTGTCAGGTTTTATGTGGTCTGTAAAGTTAGGGGTTCTGTT
 TTGTTTCCTTATTTAGGAAAGAGTACTGCTGGTGTCTGAGGGGTTATATGTTCCATT
 TAATGTGACAGTTTTTAAAGGATTTAAGTAGGGAATCAGAGTCCTTTGAGAGTGT
 GACAGACGACTCAATAACCTCATTTGTTTCTAAACATTTTCTTTGATAAAGTGCC
 25 TAAATCTGTGCTTTCGTATAGAGTAACATGATGTGCTACTGTTGATGTCTGATTTT
 GCCGTTTATGTTAGAGCCTACTGTGAATAAGAGTTAGAACATTTATATACAGATG
 TCATTTCTAAGAACTAAAATTCTTTGGGAAAAACCCTCAATTGTGATTTTAATAA
 ATTAAAAGTAGCACATTACATGGTTAGAAAATGTCAGTGTTAAAGAATGGTACA
 AAGTGAAAAGTGTATCCCTCTCTTGCCGCCGGTGGTAGCTTGTCCCAGTGGAAGC
 30 TGCTGTTAACAATTTGTGCCCCACATCCCCCTCCCTGCCCATCCACCAAAAAAA
 AGTACATTTACTTATGTAAATGTACTTATGGTGATGTATGTTTGTGTTTGGCCTCAC
 AGCATCTGTTTCCCTTAATTTGGTAGCTGCTCACATTTCCCTCGAAAGAACCACA
 CCCTCTGCATTCTCAGTTCTTTGCTTTGGATGGGACATTTGCCCTGCAGTCCCCC
 ACCCTCCAGGCCATGCCCTCTCCAGGGTGAGGCCTGTGTGATCTACCGTACTAGG
 35 GTACTAGGCCCTGAAAGAGGCTTTTCTTGTTCTCTGTCATCTGAACCTGGAGC
 GGGAGCTGTTGTAGGCCCCGCCCTTGGAGAAGAGAACTGTCTGACAGTGGGGAG
 AGAGCGCCACACCCTGGTGGCATAAACGAGTCCCTGAATCATGCCGTGGCTGAA
 CCAAGCCCTGTCTGTGGGCTTTTTCTGTTGTACTCAGGGCAGTTTGATGGGGTTAC
 TGTCCTGCATAGCCATAATGGCCCAGTATAAAGCAGCTGTTTTGATGAGATAATT
 40 GCTTTAATTAAGCAAAAGGTAGCAAAGCTTTCACTCCGCCCTGTACCTTCTGTTTC
 CACTTAGGAGCCTTCCCATGTGAGAATGTGCAGATCTGTCTCATTGTTTCCTGTGC
 AGTGTGCCCCCACTTCACCCAGTAGTTTCTGTGTGTCTGTTATGTACTAGGTACTA
 CAAGGTGCCAGGACGGTGTAGATACAGCCTCTGCTATCGTAAAACTCAATGATTC
 GGTGGGGGAAGACAAATGTCAGTAATGTACAAAGTAAAATGGCAGCTGTTAGAA
 45 GTATGAAAGGGGCGAGGGTAGGGGGAGGTAGAATCTTCCCTGACCAGGTAAAGAA
 AACCAGAGGCCTTCTCTGAGGGCAAGAGGAGGAGAGGAGAGGAGAAATAGAGTAAGGC
 AGGCAGAGGAAACAGTCTGAGCTAAGACCCTGTGGCTAGAAGTGGCAGAGGGGA
 GAGGCAGCAGGAAGGCCAGCGGGGAGGCTGGGGCCAGTGCAGGCCAGGTTG
 GAGGAGCGTAGCACATGGAGTTTGGTAGGAGTTTGGGACGCCCTGGTGGATCTT

AATTGTGATGGGGTGGGTGTGAAAGGCAGTCCAGGTTGCACTGGTTGCACAGGA
 GAAGTGATCAGAAGAGGACCCCAGCAGGTGTGAGCCGTGAGCAGAGGTGCTTCA
 GTAGTGCAGGCCATAGCTGAAGGTGTCCTACATCAGCAGGGTGATGGTGAGGTT
 TGAACCACTGTTTCACTGCATAGTCCCTGCTGATGGACACTTGAGTGTTTCAGATTT
 5 TTTGCTGGTATATTCAGTGCTGCAGTGGACATTTTCATACAAAATATTTTCGGTACA
 CTTTTGTTTATATCTGAAAGGTAAATTCCTAGCAGTAGAATTATTAGAGCAAACG
 GAATTTAACATTTTGGTGTGTATTGCCAAATTGCCCTCCCAAGTGGTTTAGTCAGC
 TTACCCTTGCCAACAATAGATCTATCCTTGCCAGCCTTGGGCATCACATTTACCA
 GTTTAATAGATTGTAAAACCATATCTTAATTGGCTACCCTGAAGCCACCATACTG
 10 GAGAGGCTGCGTACAGTGTTCACGTAGAGAGAGGGATACCCAGGAGGCCACC
 TGCTCCAACCCAGCTGCATGAGTCTTCCAGCCCAGGCACAGACATGTGGATAA
 GATTTAAACATTTCCAGCCCCAGCCTTCAAGCAATCCTAGTTGACACTGAGGGGA
 GCCAACATAAGCTGAGCTGAGAAACAGTCTGCCCAGTCTGCAGATTCATGAGCA
 AAAGAAATGTTG

SEQ ID NO: 383

>4369 BLOOD Hs.77274 gn||UG|Hs#S572505 H.sapiens uPA gene /cds=(119,1414)

/gb=X02419 /gi=37601 /ug=Hs.77274 /len=2344

AGCACAGTCGGAGACCGCAGCCCGGAGCCCGGGCCAGGGTCCACCTGTCCCCGC
 20 AGCGCCGGCTCGCGCCCTCCTGCCGCAGCCACCGAGCCGCGGTCTAGCGCCCCGA
 CCTCGCCACCATGAGAGCCCTGCTGGCGCGCCTGCTTCTCTGCGTCCCTGGTCGTG
 AGCGACTCCAAAGGCAGCAATGAACTTCATCAAGTTCCATCGAACTGTGACTGTC
 TAAATGGAGGAACATGTGTGTCCAACAAGTACTTCTCCAACATTCACTGGTGCAA
 CTGCCCCAAAGAAATTCGGAGGGCAGCACTGTGAAATAGATAAGTCAAAAACCTG
 25 CTATGAGGGGAATGGTCACTTTTACCGAGGAAAGGCCAGCACTGACACCATGGG
 CCGGCCCTGCCTGCCCTGGAACCTCTGCCACTGTCCTTCAGCAAACGTACCATGCC
 CACAGATCTGATGCTCTTCAGCTGGGCCTGGGGAAACATAATTACTGCAGGAACC
 CAGACAACCGGAGGCGACCCTGGTGCTATGTGCAGGTGGGCCTAAAGCCGCTTG
 TCCAAGAGTGCATGGTGCATGACTGCGCAGATGGAAAAAAGCCCTCCTCTCCTCC
 30 AGAAGAATTAAAATTTCACTGTGGCCAAAAGACTCTGAGGCCCGCTTTAAGATT
 ATTGGGGGAGAATTCACCACCATCGAGAACCAGCCCTGGTTTGCGGCCATCTACA
 GGAGGCACCGGGGGGGCTCTGTCACTACGTGTGTGGAGGCAGCCTCATGAGCC
 CTTGCTGGGTGATCAGCGCCACACACTGCTTCATTGATTACCCAAAGAAGGAGGA
 CTACATCGTCTACCTGGGTGCTCAAGGCTTAACCTCAACACGCAAGGGGAGATG
 35 AAGTTTGAGGTGGAAAACCTCATCCTACACAAGGACTACAGCGCTGACACGCTT
 GCTCACCACAACGACATTGCCTTGCTGAAGATCCGTTCCAAGGAGGGCAGGTGT
 GCGCAGCCATCCCGGACTATACAGACCATCTGCCTGCCCTCGATGTATAACGATC
 CCCAGTTTGGCACAAGCTGTGAGATCACTGGCTTTGGAAAAGAGAATTCTACCGA
 CTATCTCTATCCGGAGCAGCTGAAAATGACTGTTGTGAAGCTGATTTCCACCGG
 40 GAGTGTGAGCAGCCCCACTACTACGGCTCTGAAGTCACCACCAAATGCTGTGTG
 CTGCTGACCCACAGTGGAAAACAGATTCTGCCAGGGAGACTCAGGGGGACCCC
 TCGTCTGTTCCCTCCAAGGCCGATGACTTTGACTGGAATTGTGAGCTGGGGCCG
 TGGATGTGCCCTGAAGGACAAGCCAGGCGTCTACACGAGAGTCTCACACTTCTTA
 CCCTGGATCCGCACTCACACCAAGGAAGAGAATGGCCTGGCCCTCTGAGGGTCC
 45 CCAGGGAGGAAACGGGCACCAACCCGCTTTCTTGCTGGTTGTCATTTTTGCAGTAG
 AGTCATCTCCATCAGCTGTAAGAAGAGACTGGGAAGATAGGCTCTGCACAGATG
 GATTTGCCTGTGCCACCCACCAGGGTGAACGACAATAGCTTTACCCTCAGGCATA
 GGCCTGGGTGCTGGCTGCCCAGACCCCTCTGGCCAGGATGGAGGGGTGGTCCTG
 ACTCAACATGTTACTGACCAGCAACTTGTCTTTTTCTGGACTGAAGCCTGCAGGA

GTTAAAAAGGGCAGGGCATCTCCTGTGCATGGGTGAAGGGAGAGCCAGCTCCCC
 CGACGGTGGGCATTTGTGAGGCCCATGGTTGAGAAATGAATAATTTCCCAATTAG
 GAAGTGTAACAGCTGAGGTCTCTTGAGGGAGCTTAGCCAATGTGGGAGCAGCGG
 TTTGGGGAGCAGAGACACTAACGACTTCAGGGCAGGGCTCTGATATTCCATGAA
 5 TGTATCAGGAAATATATATGTGTGTGTATGTTTGCACACTTGTGTGTGGGCTGTG
 AGTGTAAGTGTGAGTAAGAGCTGGTGTCTGATTGTTAAGTCTAAATATTTCTTA
 AACTGTGTGGACTGTGATGCCACACAGAGTGGTCTTTCTGGAGAGGTTATAGGTC
 ACTCCTGGGGCCTCTTGGGTCCCCCACGTGACAGTGCCTGGGAATGTACTTATTC
 TGCAGCATGACCTGTGACCAGCACTGTCTCAGTTTCACTTTACATAGATGTCCCT
 10 TTCTTGGCCAGTTATCCCTTCCTTTTAGCCTAGTTCATCCAATCCTCACTGGGTGG
 GGTGAGGACCACTCCTTACACTGAATATTTATATTTCACTATTTTTATTTATATTT
 TTGTAATTTTAAATAAAAGTGATCAATAAAATGTGATTTTTCTGA

SEQ ID NO: 384

15 >4373 BLOOD 347357.1 M30818 g188902 Human interferon-induced cellular resistance
 mediator protein (MxB) mRNA, complete cds. 0
 GGGACAGGAGAGGAGCTGAATCCTGAGATTGTATCGCTAGGAGCCCCCAAAGTA
 CGATGACGGTCCTCGGGCCAGCATGGGGGTGCATTGGCACCATGTAAGGAAAGG
 GGCCCTCCCGTGGCACCGTTGGAGTGGGGCGGTGTGGGGTTGTTTCGGAGAGAAA
 20 AGTTTCCCATGAGCTCTGTTTCAGCAAACGGCGATGACCACTTTCGTGGCAACTA
 AACAGTCTTGCCCTCCTGCACGTGGACATTTTTCTTCATGCATATTTCTCTTGCAA
 ATGGTTCTATTGTTTGTATAACAGTATTTTCATGAGCGGAGAAGAGTTGGAAGCAA
 AAATCTGTTCATGAGAAATAGCTTGTTCAGGAAGATCGGAGGTTGCCAAGTAGCAG
 AGAAAGCATCCCCAGCTCTGACAGGGAGACAGCACATGTCTAAGGCCCAACAAG
 25 CCTTGGCCCTACCGGAGGAGAAGTCAATTTTCTTCTCGAAAATACCTGAAAAAAG
 AAATGAATTCCCTTCCAGCAACAGCCACCGCCATTTCGGCACAGTGCCACCACAAAT
 GATGTTTCCCTCCAAACTGGCAGGGGGCAGAGAAGGACGCTGCTTTCCTCGCCAA
 GGACTTCAACTTTCTCACTTTGAACAATCAGCCACCACCAGGAAACAGGAGCCA
 ACCAAGGGCAATGGGGCCCCGAGAACAACTGTACAGCCAGTACGAGCAGAAGG
 30 TGCGCCCTGCATTGACCTCATCGACTCCCTGCGGGCTCTGGGTGTGGAGCAGGA
 CCTGGCCCTGCCAGCCATCGCCGTCATCGGGGACCAGAGCTCGGGCAAGAGCTC
 TGTGCTGGAGGCACTGTGAGGAGTCGCGCTTCCCAGAGGCAGCGGAATCGTAAC
 CAGGTGTCCGCTGGTGTGCTGAAACTGAAAAAGCAGCCCTGTGAGGCATGGGCCGG
 AAGGATCAGCTACCGGAACACCGAGCTAGAGCTTCAGAGACCCTGGCCAGGTGG
 35 AGAAAGAGATACACAAAGCCCAGAACGTCATGGCCGGGAATGGCCGGGGCATC
 AGCCATGAGCTCATCAGCCTGGAGATCACCTCCCCTGAGGTTCCAGACCTGACCA
 TCATTGACCTTCCCGGCATCACCAGGGTGGCTGTGGACAACCAGCCCCGAGACAT
 CGGACTGCAGATCAAGGCTCTCATCAAGAAGTACATCCAGAGGCAGCAGACGAT
 CAACTTGGTGGTGGTTCCCTGTAACGTGGACATTGCCACCACGGAGGCGCTGAGC
 40 ATGGCCCATGAGGTGGACCCGGAAGGGGACAGGACCATCGGTATCCTGACCAAA
 CCAGATCTAATGGACAGGGGCACTGAGAAAAGCGTCATGAATGTGGTGCGGAAC
 CTCACGTACCCCTCAAGAAGGGCTACATGATTGTGAAGTGCCGGGGCCAGCAG
 GAGATCACAAACAGGGCTGAGCTTGGCAGAGGCAACCAAGAAAGAAATTACATT
 CTTTCAAACACATCCATATTTAGAGTTCTCCTGGAGGAGGGGTGAGCCACGGTT
 45 CCCCAGCTGGCAGAAAGACTTACCACTGAACTCATCATGCATATCCAAAAATCGC
 TCCCGTTGTTAGAAGGACAAATAAGGGAGAGCCACCAGAAGGCGACCGAGGAG
 CTGCGGCGTTGCGGGGCTGACATCCCCAGCCAGGAGGCCGACAAGATGTTCTTTC
 TAATTGAGAAAATCAAGATGTTTAATCAGGACATCGAAAAGTTAGTAGAAGGAG
 AAGAAGTTGTAAGGGAGAATGAGACCCGTTTATACAACAAAATCAGAGAGGATT

TTA AAAA ACTGGGTAGGCATACTTGCAACTAATACCCAAAAAGTTAAAAATATTAT
 CCACGAAGAAGTTGAAAAATATGAAAAGCAGTATCGAGGCAAGGAGCTTCTGGG
 ATTTGTCAACTACAAGACATTTGAGATCATCGTGCATCAGTACATCCAGCAGCTG
 GTGGAGCCCCGCCCTTAGCATGCTCCAGAAAGCCATGGAAATTATCCAGCAAGCTT
 5 TCATTAACGTGGCCAAAAAACATTTTGGCGAATTTTCAACCTTAACCAAACCTGT
 TCAGAGCACGATTGAAGACATAAAAGTGAAACACACAGCAAAGGCAGAAAAACA
 TGATCCAACTTCAGTTCAGAATGGAGCAGATGGTTTTTTGTCAAGATCAGATTTA
 CAGTGTGTGTTCTGAAGAAAGTCCGAGAAGAGATTTTAAACCCTCTGGGGACGCCT
 TCACAGAATATGAAGTTGAACTCTCATTTTCCAGTAATGAGTCTTCGGTTTCCTC
 10 CTTTACTGAAATAGGCATCCACCTGAATGCCTACTTCTTGGAACCAGCAAACGT
 CTCGCCAACAGATCCCATTATAATTAGTATTTTATGCTCCGAGAGAATGGTG
 ACTCCTTGCGAGAAAGCCATGATGCAGATACTACAGGAAAAAAATCGCTATTCT
 GGCTGCTTCAAGAGCAGAGTGAGACCGCTACCAAGAGAAGAATCCTTAAGGAGA
 GAATTTACCGGCTCACTCAGGCGCGACACGCACTCTGTCAATTCTCCAGCAAAGA
 15 GATCCACTGAAGGGCGGCGATGCCTGTGGTTGTTTTCTTGTGCGTACTCATTCAAT
 CTAAGGGGAGTCGGTGCAGGATGCCGCTTCTGCTTTGGGGCCAACTCTTCTGTC
 ACTATCAGTGTCCATCTCTACTGTACTCCCTCAGCATCAGAGCATGCATCAGGGG
 TCCACACAGGCTCAGCTCTCTCCACCACCCAGCTCTTCCCTGACCTTCACGAAGG
 GATGGCTCTCCAGTCCTTGGGTCCCGTAGCACACAGTTACAGTGTCTAAGATAC
 20 TGCTATCATTCTTCGCTAATTTGTATTTGTATTCCCTTCCCCCTACAAGATTATGA
 GACCCAGAGGGGGGAAGGTCTGGGTCAAATTCTTCTTTTGTATGTCCAGTCTCCT
 GGACAGCACCTGCAGCATTTGTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT
 GAGTGTGTGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT
 GACATTTAGTGACTGTTAGCGGCTCCCTTTCAGATCCAGTGGCCATGCCCCCTGC
 25 TTCCCATGGTTCAGTGTCAATTGTGTTTCCCAGCCTCTCCACTCCCCCGCCAGAAAG
 GAGCCTGAGTGATTCTCTTTTCTTCTTGTGTTTCCCTGATTATGATGAGCTTCCATTGT
 TCTGTAAAGTCTTGAAGAGGAATTTAATAAAGCAAAGAAACTTTTTAAAAACGTA
 GC

30 SEQ ID NO: 385

>4374 BLOOD 231109.2 AF133423 g6434899 Human tetraspanin TM4-A mRNA, complete cds. 0

GACTGCNGCGGCTGCGCGGAGGAGCGAGGCACTTGCTGGGGTTCGGGGCTGCGCG
 ACGGCGCAGGGGCTGCGGGGAGCGCCGCGCAGGCCGTGCAGTTCTAGCGAGGA
 35 GCGCGCCGCCATTGCCGCTCTCTGCGGTGAGCGCAGCCCCGCTCTCCGGGCCG
 GGCTTTCGCGGGCCACCGGCGCCATGGGCCAGTGCGGCATCACCTCCTCCAAGA
 CCGTGCTGGTCTTTCTCAACCTCATCTTCTGGGGGGCAGCTGGCATTATGCTAT
 GTGGGAGCCTATGTCTTCATCACTTATGATGACTATGACCACTTCTTTGAAGATGT
 GTACACGCTCATCCCTGCTGTAGTGATCATAGCTGTAGGAGCCCTGCTTTTCATC
 40 ATTGGGCTAATTGGGCTGCTGTGCCACAATCCGGGAAAGTCGCTGTGGACTTGCC
 ACGTTTGTATCATCCTGCTCTTGGTTTTTGTACAGAAAGTTGTTGTAGTGGTTTT
 GGGATATGTTTACAGAGCAAAGGTGGAATAAGAGTTGATCGCAGCATTGAGAA
 AGTGTATAAGACCTACAATGGAACCAACCCTGATGCTGCTAGCCGGGCTATTGAT
 TATGTACAGAGACAGCTGCATTGTTGTGGAATTCACAACTACTCAGACTGGGAAA
 45 ATACAGATTGGTTCAAAGAAACCAAAAACCAGAGTGTCCCTCTTAGCTGCTGCA
 GAGAGACTGCCAGCAATTGTAATGGCAGCCTGGCCCAACCCTTCCGACCTCTATGC
 TGAGGGGTGTGAGGCTCTAGTTGTGAAGAAGCTACAAGAAATCATGATGCATGT
 GATCTGGGCCGCACTGGCATTGTCAGCTATTGAGCTGCTGGGCATGCTGTGTGCT
 TGCATCGTGTGTGCGAGAAGGAGTAGAGATCCTGCTTACGAGCTCCTCATCACTG

GCGGAACCTATGCATAGTTGACAACTCAAGCCTGAGCTTTTTGGTCTTGTCTGA
 TTTGGAAGGTGAATTGAGCAGGTCTGCTGCTGTTGGCCTCTGGAGTTCATTTAGT
 TAAAGCACATGTACACTGGTGTGGACAGAGCAGCTTGGCTTTTCATGTGCCAC
 CTAAGATTTTAAGTACGATGGTGAACGTTCTAATTTCAGAACCAATTGCGAGTC
 5 ATGTAGTGTGGTAGAATTAAGGAGGACACGAGCCTGCTTCTGTTACCTCCAAGT
 GGTAACAGGACTGATGCCGAAATGTCACCAGGTCCTTTCAGTCTTCACAGTGGAG
 AACTCTTGGCCAAAGGTTTTTGGGGGGAGGAGGAGGAAACCAGCTTCTGGTTA
 AGGTAAACACCAGATGGTGCCCTCATTGGTGTCTTTTAAAAAATATTTACTGT
 10 AGTCCAATAAGATAGCAGCTGTACAAAATGACTAAAATAGATTGTAGGATCATA
 TGGCGTATATCTTGGTTCATCTTCAAAATCAGAGACTGAGCTTTGAAACTAGTGG
 TTTTAAATCAAAGTTGGCTTTATAGGAGGAGTATAATGTATGCACTACTGTTTTAA
 AAGAATTAGTGTGAGTGTGTTTTTGTATGAATGAGCCCATTCATGGTAAGTCTTA
 AGCTTGTGGAAATAATGTACCCATGTAGACTAGCAAAATAGTATGTAGATGTGA
 15 TCTCAGTTGTAAATAGAAAAATCTAATTCAATAAACTCTGTATCAGCCCCCAACA
 TATTATTTTTCATTATTTGGGGGATATTTTCAGTTCAGAGCAGCAGTATCATGTTT
 TCTTTGTTGGTGCTGTCTATAGTTCATCATGGTTTACGTGTGTTTTTCGTTATAGCTG
 TTGCCAGATTCTAAAGGGCTTGATATTCAAAAAACCACAGATGCTTTCAGTCCAG
 TATATCCTAGAAATATAGAGCTCTACTTTGTGCAATGCACTGGGGATACAGTGGC
 20 GATACTGTCCTTGTCTTCAAGGAGTTCGGAGTCCTAGTATAGG

SEQ ID NO: 386

>4379 BLOOD 234480.12.X76648 g531404 Human mRNA for glutaredoxin. 0

GCACCTTATGCTTCCCCAGAGGTGACTAAACTCTGATCATTGCCAATGGGCAGGC
 25 ACTCCCCAAATGTCCAAGGACAACAAAGATACCCAGAGTGTCTTTCATAGCTACC
 AATGATTAAATAGCAAGTATTGCATTCCTGGGCATTGCTAACTAGTGAAGTATAC
 CAGATGGAAATGTCTTCGAAGCTGTCCCTTTAAAACTCGAGCAAGCTACCAGGCA
 AACTCCGCCTCCAGGGAGGTTCCCTTATTAATAGGAGCCAACTGGCTGGGTGCGG
 30 GCTCAATACCCCAAGCAATACCTGCAACTGAGGATTCTTCCCGGGGAGACCGCA
 GCCCATCGGCATGGCTCAAGAGTTTGTGAAGTGCAAAATCCAGCCTGGGAAGGT
 GGTTGTGTTTCATCAAGCCCACCTGCCCGTACTGCAGGAGGGCCCAAGAGATCCT
 CAGTCAATTGCCCATCAAACAAGGGCTTCTGGAATTTGTCGATATCACAGCCACC
 AACCACACTAACGAGATTCAAGATTATTTGCAACAGCTCACGGGAGCAAGAACG
 GTGCCTCGAGTCTTATCGGTAAAGATTGTATAGGCGGATGCAGTGATCTAGTCT
 35 CTTTGCAACAGAGTGGGGAAGTCTGACGCGGCTAAAGCAGATTGGAGCTCTGC
 AGTAACCACAGATCTCATAGGAAATGTTCAACAATTCTGTGAAAGGTCACAGGA
 CCAATTGGAGAAATCATATGAAAAGCATAGTTGGTCTTGGTGTTCATATGGATCA
 GAGGCACAAGTGCAGAGGCTGTGGTCATGCGGAACACTCTGTTATTTAAGATGG
 CTATCCAGATAATCCTGAACACTGTGTATTTATTTTATTTAGACTACCAGCAAAG
 40 ATTAAAGCATGAAATGTAAAACATCTGATAAACTTACAGCCCCCTACACCAAG
 AGTGTATCTGTGAAAGAGCTCCTACACTTTGAAAACCTTAAGAATCCCTTATCATG
 AAGTTTGCCTGTTCTAGAATTGTAAGATTGTTAATTTCTTCAATCTCTAGTGACA
 AACTTAATTTCTTTTCTAATAAAAAAACCTATAGATGATTCAGTGATTTTGTG
 CAATTCATTTGCATGTTCTCAAGACATTAAGGAATGTTATGCGAAATACACTAAC
 45 TTAAAACTGTGTTTATATTTGGCCCTGCCATTATAAATAAAGACACGTGCTGCTG
 TCACTCACTGAGTACAAATGGCTGATATAATTTTGAAGTTTCATATAAACATGA

SEQ ID NO: 387

>4400 BLOOD 331689.11 L36870 g685175 Human MAP kinase kinase 4 (MKK4) mRNA, complete cds. 0

CTCCCAACAATGGCGGCTCCGAGCCCGAGCGGCGGCGGCGGCTCCGGGGGCGGC
5 AGCGGCAGCGGCACCCCCGGCCCCGTAGGGTCCCCGGCGCCAGGCCACCCGGCC
GTCAGCAGCATGCAGGGTAAACGCAAAGCACTGAAGTTGAATTTTGCAAATCCA
CCTTTCAAATCTACAGCAAGGTTTACTCTGAATCCCAATCCTACAGGAGTTCAAA
ACCCACACATAGAGAGACTGAGAACACACAGCATTGAGTCATCAGGAAAAGTGA
10 AGATCTCCCCTGAACAACACTGGGATTTCACTGCAGAGGACTTGAAAGACCTTGG
AGAAATTGGACGAGGAGCTTATGGTTCTGTCAACAAAATGGTCCACAAACCAAG
TGGGCAAATAATGGCAGTTAAAAGAATTCGGTCAACAGTGGATGAAAAAGAACA
AAAACAACCTTCTTATGGATTTGGATGTAGTAATGCGGAGTAGTGATTGCCCATAC
ATTGTTTCAGTTTTATGGTGCACCTCTTCAGAGAGGGTGACTGTTGGATCTGTATGG
15 AACTCATGTCTACCTCGTTTGATAAGTTTTACAAATATGTATATAGTGTATTAGAT
GATGTTATTCCAGAAGAAATTTTAGGCCAAAATCACTTTAGCAACTGTGAAAGCAC
TAAACCACTTAAAAGAAAAGTGAATTTTACACAGAGATATCAAACCTTCCA
ATATTCTTCTGGACAGAAGTGGAAATATTAAGCTCTGTGACTTCGGCATCAGTGG
ACAGCTTGTGGACTCTATTGCCAAGACAAGAGATGCTGGCTGTAGGCCATACATG
20 GCACCTGAAAGAATAGACCCAAGCGCATCACGACAAGGATATGATGTCCGCTCT
GATGTCTGGAGTTTGGGGATCACATTGTATGAGTTGGCCACAGGCCGATTTCCTT
ATCCAAAGTGGAATAGTGTATTTGATCAACTAACACAAGTCGTGAAAGGAGATC
CTCCGCAGCTGAGTAATTCTGAGGAAAGGGAATTCTCCCCGAGTTTCATCAACTT
TGTCAACTTGTGCCTTACGAAGGATGAATCCAAAAGGCCAAAGTATAAAGAGCT
TCTGAAACATCCCTTTATTTTGATGTATGAAGAACGTGCCGTTGAGGTCGCATGC
25 TATGTTTGTAATAATCCTGGATCAAATGCCAGCTACTCCCAGCTCTCCCATGTATGT
CGATTGATATCGCTGCTACATCAGACTCTAGAAAAAAGGGCTGAGAGGAAGCAA
GACGTAAAGAATTTTCATCCCGTATCACAGTGTTTTTATTGCTCGCCAGACACC
ATGTGCAATAAGATTGGTGTTTCGTTTCCATCATGTCTGTATACTCCTGTCACCTAG
AACGTGCATCCTTGTAATACCTGATTGATCACACAGTGTTAGTGCTGGTCAGAGA
30 GACCTCATCCTGCTCTTTTGTGATGAACATATTCATGAAATGTGGAAGTCAGTAC
GATCAAGTTGTTGACTGTGATTAGATCACATCTTAAATTCATTTCTAGACTCAA
ACCTGGAGATGCAGCTACTGGAATGGTGTTTTGTGAGACTTCCAAATCCTGGAAG
GACACAGTGATGAATGTACTATGTCTGAACATAGAACTCGGGCTTGAGTGAGA
AGAGCTTGCACAGCCAACGAGACACATTGCCTTCTGGAGCTGGGAGACAAAGGA
35 GGAATTTACTTTCTTCACCAAGTGCAATAGATTACTGATGTGATATTCTGTTGCTT
TACAGTTACAGTTGATGTTTGGGGATCGATGTGCTCAGCCAAATTTCTGTTTGA
AATATCATGTAAATTAGAATGAATTTATCTTTACCAAAAACCATGTTGCGTTCA
AAGAGGTGAACATTAAAATATAGAGACAGGACAGAATGTGTTCTTTTCTCCTTTA
CCAGTCCTATTTTTCAATGGGAAGACTCAGGAGTCTGCCACTTGTCAAAGAAGGT
40 GCTGATCCTAAGAATTTTTTCAATTCTCAGAATTCGGTGTGCTGCCAACTTGATGTTT
CACCTGCCACAAACCACAGGACTGAAAGAAGAAAACAGTACAGAAGGCAAAG
TTTACAGATGTTTTTAATTCTAGTATTTTATCTGGAACAACCTTGATAGCAGCTATAT
ATTTCCCCTTGGTCCCAAGCCTGATACTTTAGCCATCATAACTCACTAACAGGGA
GAAGTAGCTAGTAGCAATGTGCCTTGATTGATTAGATAAAGATTTCTAGTAGGCA
45 GCAAAAGACCAAATCTCAGTTGTTTGCTTCTTGCCATCACTGGTCCAGGTCTTCA
GTTTCCGAATCTCTTTCCCTTCCCCTGTGGTCTATTGTGCTATGTGACTTGCGCTT
AATCCAATATTTTGCCTTTTTTCTATATCAAAAAACCTTTACAGTTAGCAGGGATG
TTCCTTACCAAGGATTTTATAGCCCCAAATCTCTCATATTCGCTAGTGTTTAAAAGG
CTAAGAATAGTGGGGCCAGCCGATGTGGTAGGTGATAAAGAGGCATCTTTTCT

AGAGACACATTGGACCAGATGAGGATCCGAAACGGCAGCCTTTACGTTTCATCAC
 CTGCTAGAACCTCTCGTAGTCCATCACCATTTCTTGGCATTGGAATTCTACTGGAA
 AAAAATACAAAAAGCAAAACAAAACCCTCAGCACTGTTACAAGAGGCCATTTAA
 GTATCTTGTGCTTCTTCACTTACCCATTAGCCAGGTTCTCATTAGGTTTTGCTTGG
 5 GCCTCCCTGGCACTGAACCTTAGGCTTTGTATGACAGTGAAGCAGCACTGTGAGT
 GGTTCAAGCACACTGGAATATAAAACAGTCATGGCCTGAGATGCAGGTGATGCC
 ATTACAGAACCAAATCGTGGCACGTATTGCTGTGTCTCCTCTCAGAGTGACAGTC
 ATAAATACTGTCAAACAATAAAGGGAGAATGGTGCTGTTTAAAGTCACATCCCT
 GTAAATTGCAGAATTCAAAGGTGATTATCTCTTTGATCTACTTGCCTCATTTCCCT
 10 ATCTTCTCCCCACGGTATCCTAAACTTTAGACTTCCCCTGTTCTGAAAGGAGA
 CATTGCTCTATGTCTGCCTTCGACCACAGCAAGCCATCATCCTCCATTGCTCCCGG
 GGACTCAAGAGGAATCTGTTTCTCTGCTGTCAACTTCCCCTCTGGCTCAGCATAG
 GGTCACCTTGGCCATTATGCAAATGGAGATAAAAGCAATTCTGACTGTCCAGGAGC
 TAATCTGACCGTTCTATTGTGTGGATGACCACATAAGAAGGCAATTTTAGTGTAT
 15 TAATCATAGATTATTATAAACTATAAACTTAAGGGCAAGGAGTTTATTACAATGT
 ATCTTTATTAAAAACAAAAGGGTGTATAGTGTTCAAAAAGTGTGAAAATAGTGTA
 GAACTGTACATTGTGAGCTCTGGTTATTTTTCTCTTGTACCATAGAAAAATGTATA
 AAAATTATCAAAAAGCTAATGTGCAGGGATATTGCCTTATTTGTCTGTAAAAAAT
 GGAGCTCAGTAACATAACTGCTTCTTGGAGCTTTGGAATATTTTATCCTGTATTCT
 20 TGTTTGAATTCCTCCTCTATTTAAGATATATACATGGAATCGAAGTGTTTATGTAA
 TAGTTCTATCCTTTTGCCTGCAGGTGAGTTGTAATAAATCTAGGATGTGATGATG
 ACTTGTGAATTTGATTTTCTGAAATCAGACCCTGAGAGGGGAAATCTTAAAGTA
 AATTACATTAAATTATCTGTGCATTTGACACCAGG

25 SEQ ID NO: 388

>4408 BLOOD gi|2046421|gb|AA393452.1|AA393452 zt71c01.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:727776 5' similar to WP:D2045.8 CE00608 TNF-ALPHA INDUCED PROTEIN B12 ;, mRNA sequence

CTCATTGTTTTGGACAGTCTCAAACAGCACTATTTTCATTGACAGAGATGGACAGA
 30 TGTTTCAGATATATCTTGAATTTTCTACGAACATCCAAACTCCTCATTCCCTGATGAT
 TTCAAGGACTACACTTTGTTATATGAAGAGGCAAAATATTTTCAGCTTCAGCCCA
 TGTTGTTGGAGATGGAAAGATGGAAGCAGGACAGAGAACTGGTCGATTTTCAA
 GGCCCTGTGAGTGCCTCGTCGTGCGTGTGGCCCCAGACCTCGGAGAAAGGATCA
 CGCTAAGCGGTGACAAATCCTTGATAGAAGAAGTATTTCCAGAGATCGGCGACG
 35 TGATGTGTAACCTCTGTCAATGCAGGCTGGAATCACGACTCGACGCACGTCATCAG
 GTTCCACTAAATGGCTACTGTACCTCAACTCAGTCCAGGTCCTCTAGAGGTTG
 CAGCANAGAGGATTTGAAATCGTGGGCT

SEQ ID NO: 389

40 >4409 BLOOD Hs.197877 gnl|UG|Hs#S1969960 Homo sapiens cDNA FLJ20693 fis, clone KAIA2667 /cds=(83,1195) /gb=AK000700 /gi=7020950 /ug=Hs.197877 /len=3148
 AACTTCTCGGGAAGATGAGGCAGTTTGGCATCTGTGGCCGAGTTGCTGTTGCCCGG
 GTGATAGTTGGAGCGGAGACTTAGCATAATGGCAGAACCTGTTTCTCCACTGAAG
 CACTTTGTGCTGGCTAAGAAGGCGATTACTGCAGTCTTTGACCAGTTACTGGAGT
 45 TTGTTACTGAAGGATCACATTTTGTGTTGAAGCAACATATAAGAATCCGGAAGTTGA
 TCGAATAGCCACTGAAGATGATCTGGTAGAAATGCAAGGATATAAAGACAAGCT
 TTCCATCATTGGTGAGGTGCTATCTCGGAGACACATGAAGGTGGCATTTTTTTGGC
 AGGACAAGCAGTGGGAAGAGCTCTGTTATCAATGCAATGTTGTGGGATAAAGTT
 CTCCTAGTGGGATTGGCCATATAACCAATTGCTTCCTAAGTGTTGAAGGAACTG

ATGGAGATAAAGCCTATCTTATGACAGAAGGATCAGATGAAAAAAGAGTGTGA
 AGACAGTTAATCAACTGGCCCATGCCCTTCACATGGACAAAGATTTGAAAGCTG
 GCTGTCTTGTACGTGTGTTTTGGCCAAAAGCAAAATGTGCCCTCTTGAGAGATGA
 CCTGGTGTAGTAGACAGTCCAGGCACAGATGTCACTACAGAGCTGGATAGCTG
 5 GATTGATAAGTTTTGCCTAGATGCTGATGTCTTTGTTTTGGTCGCAAACCTCTGAAT
 CAACACTAATGAATACGGAAAAACACTTTTTTCACAAGGTGAATGAGCGGCTTTC
 CAAGCCTAATATTTTCATTCTCAATAATCGTTGGGATGCCTCTGCATCAGAGCCA
 GAATATATGGAAGACGTACGCAGACAGCACATGGAAAGATGCCTGCATTTCTTG
 GTGGAGGAGCTCAAAGTTGTAAATGCTTTAGAAGCACAGAATCGTATCTTCTTTG
 10 TTTTCAGCAAAGGAAGTTCTTAGTGCTAGAAAGCAAAAAGCACAGGGGATGCCAG
 AAAGTGGTGTGGCACTTGCTGAAGGATTTTCATGCAAGATTACAGGAATTTTCAGA
 ATTTTGAACAAATCTTTGAGGAGTGTATCTCGCAGTCAGCAGTGAAAACAAAGTT
 CGAACAGCACACTATCAGAGCTAAACAGATACTAGCTACTGTGAAAACATAAT
 GGATTCAGTAAACCTGGCAGCTGAAGATAAAAGGTTTCATGTGCAATGACAGAT
 15 GAAATTTGTGCGACTGTCTGTTTTGGTTGATGAATTTTGTTCAGAGTTTCATCCTAA
 TCCAGATGTATTAAAAATATATAAAAGTGAATTAAATAAGCACATAGAGGATGG
 TATGGGAAGAAATTTGGCTGATCGATGCACCGATGAAGTAAACGCCTTAGTGCTT
 CAGACCCAGCAAGAAATTATTGAAAATTTGAAGCCATTACTTCCAGCTGGTATAC
 AGGATAAACTACATACACTGATCCCTTGCAAGAAATTTGATCTCAGTTATAATCT
 20 AAATTACCACAAGTTATGTTTCAGATTTTCAAGAGGATATTGTATTTTCGTTTTCCC
 TGGGCTGGTCTTCCCTTGATACATCGATTTTTGGGCCCTAGAAATGCTCAAAGGGT
 GCTCCTAGGATTATCAGAGCCTATCTTTCAGCTCCCTAGATCTTTAGCTTCTACTC
 CCACTGCTCCTACCACTCCAGCAACGCEAGATAATGCATCACAGGAAGAACTCAT
 GATTACATTAGTAACAGGATTGGCGTCCGTTACATCTAGAACTTCTATGGGCATC
 25 ATTATTGTTGGAGGAGTGATTGGGAAACTATAGGCTGGAAACTCCTATCTGTTT
 CATTAAGTATGTATGGAGCTTTGTATCTTTATGAAAGACTGAGCTGGACCACCCA
 TGCCAAGGAGCGAGCCTTTAAACAGCAGTTTGTAAACTATGCAACTGAAAAACT
 GAGGATGATTGTTAGCTCCACGAGTGCAAACTGCAGTCACCAAGTAAAACAACA
 AATAGCTACCACTTTTGCTCGCCTGTGCCAACAAAGTTGATATTACTCAAAAACAG
 30 CTGGAAGAAGAAATTGCTAGATTACCCAAAGAAATAGATCAGTTGGAGAAAATA
 CAAAACAATTCAAAGCTCTTAAGAAATAAAGCTGTTCAACTTGAAAATGAGCTG
 GAGAATTTTACTAAGCAGTTTCTACCTTCAAGCAATGAAGAATCCTAACAATAGA
 GATTGCTTTGGTGACCATGATAGGAGGAAACGAACTTGTAAGATTGGAACAGT
 TGTTATTTTTATGAAATTACTTTAAATATGAATTGTACTAACTGTACCTAAATAGC
 35 AAAGCCCTGTGTAGATTCTGGTAATGATCTGTCTCAGGGTATGTGTATTTTTGAA
 GAGTGTTATGTCCTTAGTTTTAATTTTGAGTAAAGAAAAGGCTAAAATCATGAAT
 TAGTTACAAGCAACAGTACCAACTTATGTGACCCCTGAGGGGTGGGGCTGTGAG
 CTCTTAATTTGTTTTTGATTCTGAAAACTCTGCTTCCTGGCATCCAGGAGTTAGA
 GATTGAGCCTTTCATCTTCTTCTCAAACTAGTTTTTTGATGCTTTCCTTCATGGG
 40 AATAGTCACTTTTTTATTTAGTAAATCGCATTGCTGGAACCACCAAGGAGTGTGG
 AATGTCCTTGAGTGTATTATTTATGCAAGTCACAGTCACGTTGCCATCATGGCAG
 CTATGTGAAACACTAATAAATGTGTTTTTACTTTTTATTCCCGTTAAAACTGATGT
 AAAACAGGATAAAGGCTTGTTATAGTCACTTATAAGTATCTGGGTCTAAGTAATT
 TCCTTAGATGTTTCTAAAGAAACATTTTCAGCTTTGCTCCCATTATGATTCCAATA
 45 AGGAACGCTTTCCTAGTGCAATTTTAGGAGTAAAGTTTGAAGAGATAAAAATAG
 CCAAAGATAGGAGACGTCTGAATTTTGAATGATAAACAGTGATGTTTTAAAAAA
 GCTGTTGTTCTTCAGGAGGCATTTGCCTAGGATATTGCTGGATTATACCCCATTTGG
 AGGCTTTTAATTTTATTTGTATGAATTTTCCAGGATTTCAATTAATAAATTATTATTG

TATTTTTTACCTTAATGAAAGATTTTGGGTCAAATATCTTTCTATATTA AAAAGCT
GATTGAGTCTGTACATATGT

SEQ ID NO: 390

5 >4415 BLOOD 347990.5 D87465 g1665814 Human mRNA for KIAA0275 gene, complete
cds. 0

CGGACGCGTGGGAACGAAGCCACCCATTACGGTATGATGATGTCAAACGTGATG
CTGATGCTACAGTTACAGCCCCTGCTGGCGCAGCCTCTCTGATTCTCTCTCCCTCT
CCGCGTCCAGTGCTGGGCTTTTTCAGACAAGTGCATCTCCTAACCAGGTCACATT
10 TCAGCCGCGACCCACTCTCCGCCAGTCACCGGAGGCAGACCGCGGGAGGAGAGC
TGAGGACAGCCGCGTGCGCTTCGCCAGCAGCGGGGTGGGAGGAAGGACATTAAA
ATACTGCAGAAGTCAAGACCCCCCAGGTGGAACCCAGACCACGATGCGCGCCC
CGGGCTGCGGGCGGCTGGTGCTGCCGCTGCTGCTCCTGGCCGCGGCAGCCCTGGC
CGAAGGCGACGCCAAGGGGCTCAAGGAGGGCGAGACCCCCGGCAATTTTCATGGA
15 GGACGAGCAATGGCTGTCGTCCATCTCGCAGTACAGCGGCAAGATCAAGCACTG
GAACCGCTTCCGAGACGAAGTGGAGGATGACTATATCAAGAGCTGGGAGGACAA
TCAGCAAGGAGATGAAGCCCTGGATACCACCAAGGACCCCTGCCAGAAGGTGAA
GTGCAGCCGCCACAAGGTGTGCATTGCCAGGGCTACCAGCGGGCCATGTGCAT
CAGTCGCAAGAAGCTGGAGCACAGGATCAAGCAGCCGACCGTGAAACTCCATGG
20 AAACAAAGACTCCATCTGCAAGCCCTGCCACATGGCCCAGCTTGCCTCTGTCTGC
GGCTCAGATGGCCACACTTACAGCTCTGTGTGTAAGCTGGAGCAACAGGCGTGC
GCTGAGCAGCAAGCAGCTGGCGGTGCGATGCGAGGGGCCCTGCCCTGCCCGACG
GAGCAGGCTGCCACCTCCACCGCCGATGGCAAACCAAGAGACTTGACCGGTCAG
GACCTGGCTGACCTGGGAGATCGGCTGCGGGACTGGTTCCAGCTCCTTCATGAGA
25 ACTCCAAGCAGAATGGCTCAGCCAGCAGTGTAGCCGGCCCGGCCAGCGGGCTGG
ACAAGAGCCTGGGGGCCAGCTGCAAGGACTCCATTGGCTGGATGTTCTCCAAGC
TGGACACCAAGTGCTGACCTCTTCCTGGACCAGACGGAGCTGGCCGCCATCAACCT
GGACAAGTACGAGGTCTGCATCCGTCCCTTCTTCAACTCCTGTGACACCTACAAG
GATGGCCGGGTCTCTACTGCTGAGTGGTGCTTCTGCTTCTGGAGGGAGAAGCCCC
30 CCTGCCTGGCAGAGCTGGAGCGCATCCAGATCCAGGAGGCGCCAAGAAGAAGC
CAGGCATCTTCATCCCGAGCTGCGACGAGGATGGCTACTACCGGAAGATGCAGT
GTGACCAGAGCAGCGGTGACTGCTGGTGTGTGGACCAGCTGGGCCTGGAGCTGA
CTGGCACGCGCACGCATGGGAGCCCCGACTGCGATGACATCGTGGGCTTCTCGG
GGGACTTTGGAAGCGGTGTGCGCTGGGAGGATGAGGAGGAGAAGGAGACGGAG
35 GAAGCAGGCGAGGAGGCCGAGGAGGAGGAGGGCGAGGCAGGCGAGGCTGACG
ACGGGGGCTACATCTGGTAGACGCCCTCAGAAGCCGGCTGCCGGGGGGGGGACTC
AACAGCAGAGCTCTGAGCAGCAGCAGGCAACTTCGAGAACGGATCCAGAAATGC
AGTCAGAAGGACCCTGCTCCACCTGGGGGGACTGGGAGTGTGAGTGTGCATGGC
ATGTGTGTGGCACAGATGGCTGGGACGGGTGACAGTGTGAGTGCATGTGTGCAT
40 GCATGTGTGTATGTGTAGTGTGTGTGTGGCATGCGCTGACAAATGTGTCCTTGAT
CCACACTGCTCCTGGCAGAGTGAGTAACCCAAAGGCCCTTCGGCCTCCTTGTA
CTGTTTTCTTTCTTTTGTGTTGGTTTTAAATAACATTCACACACAAATACAAAT
TGACAGGTCAAATCCATGAAATGAGATCCCCCAGCCGTGTCCTCCAGCCCAGCC
CTGACCCCTTGTTTTCTACCCTGGCTCCCCTTGGTTTTCTACCCTGGCTCAACCGAC
45 CCCTGTCTGCCCTTCTCCCTCCTGCTTCTGAGGTCAAGCTCTGGCCTGCGAGCCTG
TCCCCATTGCAAAGGGGAGGGAGGGGCAGGGAGCTGTCTACCAGCTGAGGTCCT
CCCAAACTGGGCCGATGTGGTGTGACATCCCCACCAGCCTCAGATGAGACGGG
CCAGGACGCCCAGCCACAGCAAGCCCTGTCCCTTTGCCGGATCCCCAAACACTAG
AGAAGCTCTCCTAACCCAAGGCGGAGAATGAAGGTGGTGGCGGCAGAGGAGGA

GGGCAGCAGCTGAGAGGCCAGGGACAGGGTGCCTCGCCAAGCTGTCTGAGGTCT
GTCCCAGGTGGCCCAGGTGGTGCAGGTAGAACAGGGTGAGGAGAGGGGGTTCGG
CTCAGCAGGAGGAGGCTGTGGCTGCAGAGCCTGGGGGAGCTTTTAGGTGTTGAG
ATGGGGCAGCTCTGAATCCTAGACCCTGGAATAGCCTGTCCCTTTTCTCTGGGTC
5 TCGTGGTGGAGCCATGATCTGGGCTGCTCTCTTGGGGACACTGGGTGGTGGTTAC
ACAGTTGACCTCTGCCTGGCTCCCCCTTGGTGCAACTCCTGCCTCCATCCCCCTTG
CTGGGGTCCCCTCATCCACTTGAGGGGCGCCTGAGGGCCAGGAGCAGCAGGCAAG
GAGCCTGGGTCTAGGCTAAGGGGGTGTGTGCCACCTCCTCCCTGACCCTTAACA
CTCCTGTCCTGCCAGACCAACAGAGAGAGCTGTCCCTGAGACCCCGGAGAGAA
10 GCAGCTGCCGAAAGCTGCAGCCTTTCGCACTCTGAGACCATGATCTTCCTCCTG
CCAGGGGAGAGCCACCCACAGGCCATGTCCAGCCCCACTTCCCTCAGCCCCCAG
GGCTTCCTTCTGGCCCCCTCTGAGGATTCCCTAGGGCTGCCCCGCAGAGGGGCTTC
CCCAAGCTCTGTTTTGAAGCCTGCAATGTGGAAGAGTGAGAAGTCAGAGGGAAC
AGGACAGGTGCAGCCGGGCTCTGAGGCCACACCTCACACCTCGCTGTTCCCCAAC
15 ATCCCCTGAGCAGTGTGAGCTCATCTCACCAGATGAGAAGAGGGCCCTGTGCATTT
CTTTTGTGTTGTTGTTGCTGTTTTCCCCCACCATCCAGTTCTCCTCAGCAAAGCA
AATTCCTTAACACCTTTGGTGGAGAATTTCTTACCCAGACTTGGGGCTGTGATGC
CCTTCAGTGCCTGGTGAAGTGCAGCGTGTGTGCGTGTGCCTGTGTGTGAACCTGGG
GGCCATCCTGGTGGCCTGGGAGCGTGAGGAGAGGGCCCCCTGTGTGCTGGGTGAG
20 TGGTGGGTGTGGGGTCAATGCAGTGAGGCTCTCTGGGTGAGGCTCCCAACCTGGC
AGTCCCAGCCTCCAGCATCTGTGAGCGTCTGTTGGACTTTACAGAAGAGCCTC
ATCCCGTCTGCCCCCTCACTCTGCCCTGGAATCAACATCTTCCGAGTCCTTCTTGGG
GGAAATAGCAGAGCCECCACTTAACCTCATAAACTGCTTCCCATTCGCGAGCGGAG
TTCTGATTGTTGAGGTGTGCGTGTGTTCCAGGTCCCCCAGTCCCCCTCTTTCTCGTG
25 TCCTCTCTCTGTCCTTCACCTCCCCACTCCAGCCCCGGCTCAGTTCAGGGAAATGC
TGTTCCATATCAGCCCTCTGCTCTCTGAGGCAGCCGCGCCTCTGACTCGGAGCTA
CTTGAACTTCTGCTCTTGCTAGGATTGGAGTCTACCTATCTCTTCCATTTGTCCC
AGCTGGAGTTCTGGAACTTTCCCTCCTCGGGGTGGGGGTGGGGGTGTTAAGGATG
CTGGGGGGCCTGGGGAAGGAAGGAGTTCAGAGGAAGGGTGTCCCCTGTCTCTT
30 GATGTACCCCTCCGCTCCTGGGACACGTGCTCTCTCTGTCTCTGGGTCTTCTGGCT
GTGCACGTTTGTGTGTCCTTGTAATATGTTTTAGGAAGAAAGCAAAAGGGACTG
AACTAGCCTCTGGTAGGATTGCAGGGGTCCAGCCTTGCCTGTTTCCGAAGCCCC
ACACTGCCTTTCGCCCCACTGAGACTGGTCCCCTCAAAAGGTAGACAAAACAGC
AGCTCCCTGTGGAGCTGAAGGGCGGCCTCAAAGTGGCTTTTTGTTAGACAAGGTT
35 AAGGTTTCCTCATGAGCAAGGTTGCAGATCGGTCTTCCCTCAGCTCCTTGATTGT
GACCTTGACCAAGGGGCCTGCCACCCAGCCCCTCCAGTGCCCTCTCCTCGATGCC
TCGCTCCTTCCCTGCCCCCACTCCCCTGGCTTAGGCAGGTAGGGGAATTAGGGCCA
TGCTGGAAGAAGCTTAACCATGTGTTCAAAGAACGGTTTCTTGCTTGCTTGGTCC
TGGAACCTCCCCTTGGCTGCCCCAGGCCTCCTTGGCCCATGGGTGCTGGGGGAGGT
40 GGATGTCAGATCTGGTAGGTTGCAGCAGAGAAAATAAATGTGCCTTGAGAGACC
ACTCAGAGAGGGTCCAAGGGTGATGGAGAAGGAAGCATGGCCTGGGAGCTTGG
AAGGGAGGGGTGGTGGGTGGCGGCATCTTGAAGTCCCCCTGTTGTCCCCACACGT
GGGGGGTGGTCACCCCCCTTCACTCCAGCCCGCCTGCCTTCAAGCCTTCCATGAGC
TTCACCTGCTTCCAACCTTCACTTTGGAGGGGGTGGGGTCCGTTGGCATCAACACG
45 GGGACCCTCTGCTTCACCAAAGCCCGAGCCCTCAGCCCCTGGGGAGAACAATG
GCTGAGCTTTGATACCTGGGGTCGTGAGAGGCTGCGGGCTGGCGGCAGTCCCA
GGGGAGAGACACCACAGAAGGAGACCCAGACATCCCGAGGAAGTTCCCAGCAG
AGCAAACCTGCTTTCAGCCTGAAGCCTGCTTAAACTGTGTGATGTGAATAACTG
AGCTTAGAGTTAGGAATTGTGTTCAAGTGCTTGGATTTCCGTCTGTAGATTTAACT

GCTGAAATTGTATCTCTCAGTAATTTTAGATGTCTTTTAAAAAATTGAAAAACAA
 AGTGTTAGACTGTGTGCGTGTGCGTTGATGGGCACTCAAGAGTCCCGTGAGTCAT
 CCAGCCCTGCCTTTCCCTGCGCCCCCATCCTCTCACGTCCCGCCCCGCCTCCACT
 TGGGGACCCTGCCTCGTGTGCTCTTTATCTGCCTATTACTCAGCCTAAGGAAACA
 5 AGTACACTCCACACATGCATAAAGGAAATCAAATGTTATTTTAAAGAAAATGGA
 AAATAAAAACCTTTATAAACACCAAAAAAAAAAATAAAGGGG

SEQ ID NO: 391

>4435 BLOOD Hs.278634 gnl|UG|Hs#S417730 Human mRNA for KIAA0146 gene, partial
 cds /cds=(0,2756) /gb=D63480 /gi=1469873 /ug=Hs.278634 /len=3218

10 CTCCCGGAGATGCCCCGCGGCAGCCGCGCTCGGGGCTCTAAGAGAAAAAGGAGT
 TGGAATACAGAAATGCCCATCCTTTCCAGGAGAAAGACCACTGCAGGTCAGAAGA
 GCAGGTCTCAGGACAGCAGGGGCAGCTGCCTCTCTCTCTGAAGCATGGCTCAGGT
 GTGGAGAAGGGTTTCAGAACACTTCTGGGAATCCGTCATTAACAGCTGAAGAGA
 15 AGACGATTACAGAAAAGCACCTTGAATTATGCCCTAGACCCAAGCAAGAAACCA
 CCACATCTAAAAGCACCAAGTGGGCTTACAGACATAACATGGAGCTCCAGTGGA
 GTGATTTGTCGGATGAAGATAAGACACTTTCTCAGTTACAGAGAGATGAATTACA
 GTTTATCGACTGGGAGATTGACAGTGACAGGGCAGAGGCTAGTGACTGTGATGA
 ATTTGAAGATGACGAGGGTGCTGTGGAAATCTCAGACTGTGCTTCTTGTGCAAGT
 20 AATCAGTCTTTGACAAGTGATGAGAAGCTGTGCGGAGCTTCCCAAGCCAAGTTCTA
 TAGAAATTTTAGAGTATTCATCAGATAGTGAAAAAGAAGATGATTTGGAAAATG
 TCCTACTCATTGATTGAGAATCCCCTCACAATACCAAGTGCAGTTTGCATCGGA
 TGCAAGACAGATTATGGAGAGACTGATAGATCCAAGGACAAAATCAACAGAGAC
 CATTTTGCATACACCTCAGAAACCCACAGCTAAGTTTCCAGGACTCCAGAAAAT
 25 TCAGCAAAGAAGAAGCTTTTAAGAGGTGGACTAGCAGAAAGACTAAATGGACTG
 CAGAATCGAGAGAGATCTGCTATTTCTTTGTGGAGACATCAATGTATTTCTTACC
 AAAAGACACTTTCAGGTAGAAAATCTGGTGTATTAAGTGTGAAAATTTTAGAGCT
 GCATGAGGAATGTGCCATGCAAGTTGCCATGTGTGAGCAGTTATTGGGGTCCACCA
 GCCACCAGCTCCTCCCAAAGTGTGGCTCCAGGCCTGGAGCTGGCCTGAAAGTTC
 30 TCTTCACCAAGGAGACTGCAGGCTACCTCAGGGGCCGTCCCCAGGACACTGTCCG
 GATCTTCCCTCCCTGGCAAAAACCTGATTATTCCAAGTGGAAGTTGCCCTGTTATTC
 TGAATACTTACTTTTGTGAGAAAGTTGTTGCCAAAGAAGATTCAGAAAAAACTTG
 TGAAGTGTACTGTCCGGACATACCCCTTCCAAGAAGAAGCATCTCTTTGGCCCAG
 ATGTTTGTAAATTAAGGGTCTAACAAATAATTACCTGAAATCCAGGTTGTGTGTA
 35 GTGGTGTAGCCACTACAGGGACAGCCTGGACCCATGGGCACAAAGAAGCAAAAC
 AGCGCATCCCAACCAGCACTCCCCTGAGGGATTCTCTCCTGGATGTGGTGGAAG
 CCAGGGAGCTGCCTCGTGGCCAGGAGCTGGAGTCCGAGTGGTGGTGCAAAGAGT
 GTATTCTCTTCCCAGCAGAGACAGCACCAGGGGTCAGCAGGGGGCCAGCTCAGG
 ACACACAGACCCAGCTGGAACCTCGAGCCTGCCTTCTGGTACAAGATGCCTGTGG
 40 AATGTTCCGGTGAAGTGCACTTGGAGTTCACCATGTCGAAGGCAAGACAGTTGGA
 AGGGAAGTCTTGCAGCCTGGTGGGAATGAAGGTTCTACAGAAAGTCACCAGAGG
 AAGGACAGCGGGGATTTTCAGTTTGATTGACACCCTGTGGCCCCCAGCGATACCT
 CTGAAAACACCTGGCCGCGACCAGCCCTGTGAAGAGATAAAAACTCATCTGCCT
 CCTCCAGCCTTGTGTTACATCCTCACAGCTCATCCAAATCTGGGACAAATTGATA
 45 TAATTGACGAAGACCCCATTTATAAGCTTTACCAGCCTCCAGTTACCCGCTGCTT
 AAGAGACATTCTCCAGATGAATGATCTTGGTACCCGTTGCAGTTTCTATGCCACG
 GTGATTTACCAAAAACCACAGCTGAAGAGTCTGCTGCTTCTGGAGCAAAGGGAG
 ATCTGGCTGCTAGTGACCGATGTCACTCTGCAAACGAAGGAGGAGAGAGACCCC
 AGGCTCCCCAAAACCCTGCTGGTCTATGTGGCCCCCTTGTGTGTGCTGGGCTCTG

AAGTCCTGGAGGCACTCGCTGGGGCTGCCCCTCACAGCCTCTTCTTCAAGGACGC
 TCTCCGTGACCAGGGTCGGATTGTTTGTGCTGAACGAACTGTCTCTTGCTTCAG
 AAGCCCCCTTTGAGTGTGGTCTCTGGTGCAAGTTCCTGTGAGCTGCCTGGCCCCGG
 TGATGCTCGACAGCCTGGACTCTGCAACACCTGTCAACTCCATCTGCAGTGTTC
 5 AGGCACTGTGGTTGGCGTGGACGAGAGCACTGCTTTCTCATGGCCTGTGTGTGAC
 ATGTGTGGCAACGGGAGATTGGAACAGAGGCCGGAAGACAGAGGCGCCTTTTCC
 TGTGGGGACTGCTCCCGGGTGGTCACATCTCCTGTTCTCAAGAGGCACCTGCAGG
 TCTTCCTGGACTGCCGCTCAAGACCGCAGTGCAGAGTGAAGGTCAAGCTGTTGCA
 GCGCAGCATTTCCTCCCTGCTGAGGTTTGCCGCCGGTGAAGATGGGAGCTACGAA
 10 GTGAAGAGTGTCTCGGAAAGGAAGTGGGGTTGTTAAATTGTTTTGTCCAGTCCG
 TAACCGCCACCCGACCAGCTGCATTGGATTGGAGGAAATCGAGCTTCTGAGTGC
 AGGAGGGGCCTCTGCAGAACACTAGCGGTTGCCGCAGGATCTGTGAACCTTTGCA
 ATGTGGCTGCAAGGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGT
 TATGGACACAGTGAACGTAGTTTACGATCTTGAAATGAAACTTAGATTTTTCTGG
 15 GGAAATGTTTACAGATACAGTTTTGTGAACTGTAAATCAAAATACCTTTTTCTACAG
 TTTATCTTTTATTTTCTGCAAATTTAGGAACATATTTACTCGTTTTACATTGAATC
 TTAAGTTTAAAGCTCTTCATTTGGTATTTAGGCAATATATGAGAAAAAAATTTTTTT
 TGTTTCAATTTGTAATTTTAAACAAGTTGAACATTTTACCATGATTGAACATGTTTTTA
 TTACAGTATTTAACATTCCCCCAAAGAATACCCTGCAAAGTGTAACCTTTGTCC
 20 CATACTGTGATATTACTGTTCTGCTACAATAAATGTCAAACCT

SEQ ID NO: 392

>4460 BLOOD 021654.1 J32849 g1322219: Human Nini mRNA, complete cds.

GTGTTAGTGACTAATCATTGGAGACAAGCATGTTTAGTATTTGAGCATTCGTTAA
 25 ATGCTAAAGAAAAATCGCCGTTAAAGCAGTTTTCTTTTTCACTGTCTTTTTCTTTT
 CGCGGGGAACCCAGCTGTTCTGCGAGGGCCACCTCCTCAGGAAGACCCCGCAG
 CTCTCCCGCGGCGCTTCTGCAAGAGGCAGCGACAGTTTCGAGAACCCGGGCGCTTC
 CCCTCCCAAGTGCCTCCCGGGGTTCCGGCGTTTCAGGCGCTGCTGTTTTCCGGGAA
 GGGCAGGCGCGCTGGGCCTTGGGGAGCTGCGCTCGGCGGGCGGACGCGGGGGAT
 30 CATGGAAGCTGATAAAGATGACACACAACAAATTCTTAAGGAGCATTCGCCAGA
 TGAATTTATAAAGATGAACAAAATAAGGGACTAATTGATGAAATTACAAAGAA
 AAATATTCAACTAAAGAAGGAGATCCAAAAGCTTGAAACGGAGTTACAAGAGGC
 TACCAAAGAATTCCAGATTAAAGAGGATATTCCTGAAACAAAGATGAAATTCTT
 ATCAGTTGAAACTCCTGAGAATGACAGCCAGTTGTCAAATATCTCCTGTTTCGTTT
 35 CAAGTGAGCTCGAAAGTTCCTTATGAGATACAAAAAGGACAAGCACTTATCACC
 TTTGAAAAAGAAGAAGTTGCTCAAAATGTGGTAAGCATGAGTAAACATCATGTA
 CAGATAAAAGATGTAAATCTGGAGGTTACGGCCAAGCCAGTTCCATTAAATTCA
 GGAGTCAGATTCCAGGTTTATGTAGAAGTTTCTAAAATGAAAATCAATGTTACTG
 AAATTCCTGACACATTGCGTGAAGATCAAATGAGAGACAAACTAGAGCTGAGCT
 40 TTTCAAAGTCCCGAAATGGAGGCGGAGAGGTGGACCGCGTGGACTATGACAGAC
 AGTCCGGGAGTGCAGTCATCACGTTTGTGGAGATTGGAGTGGCTGACAAGATTTT
 GAAAAAGAAAGAATACCCTCTTATATAAATCAAACCTGCCATAGAGTTACTGTT
 TCTCCATACACAGAAATACACTTGAAAAAGTATCAGATATTTTCAGGAACATCTA
 AGAGGACAGTGCTTCTGACAGGAATGGAAGGCATTCAAATGGATGAAGAAATTG
 45 TGGAGGATTTAATTAACATTCACCTTCAACGGGCAAGAATGGAGGTGGAGAAG
 TAGATGTGGTCAAGTGTTCTCTAGGTCAACCTCACATAGCATACTTTGAAGAATA
 GACTTAACAGAATCATGAAACTATAGCTTTTTTAACCCGGAATTACTGTAAATGTT
 TGACAAAAATGAATATGCTTTTCCTTAAAAAATGAAAATTTAATTTTTACCATC
 CATTTATGTTTAGATACAAAACCTTATTTCCATGTTTCTGAATCTTCTTTGTTTCAA

ATGGTGCTGCATGTTTTCAACTACAATAAGTGCCTGTAATAAAGAAGATTCAGA
 AACATGGAAATAAGTTTTGTATCTAAACATAAATGGATGGTAAAAATTAAGTTT
 TCATTTTTTAAGGAAAAGCATATTCATTTTTGTCAAACATTTACAGTAATCCGGGT
 TAAAAAGCTATAGTTTTTCATGATTCTGTAAAGTCTATTCTTCAAAGTATGCTATGT
 5 GAGGTTGACCTAGAGAACAACCTTGACCACATCTACTTCTCCACCTCCATTCTTTGCC
 CGTTGAAAGTGAATGTTAATTAATCCTCCACAATTTCTTCATCCATTGGAATGCC
 TTCCATTCTGTGTCAGAAGCACTGTCCTCTTAGATGTTCTGAAAATATCTAAGAA
 GGAAAAAATGATAAATAGAAAGATTTCTAAGAGCTTTGAATTACAAAACCTTAC
 ATTCATAATCTCTGCTTAATATTTTTTATTTTATCTTAGAAGAGACAAGAAATCTT
 10 AGGAAGATTTTCCAAGCAAGAGAATATCCAAGTCAGATCTGAGTTTTAGAAAGA
 GAACTCTGGTGGCATTATGGAACACAGAGGAAAGGAGGGATGCTCTGGGAACAG
 AAAGACCAGGTAAAGAGGTAGTCAGAAGTGGAGCTGGCAAGATTTAGTGACCAA
 ATGAATGTTGGAGGTGAAGCAAACCTGAAGATTTAAGTATGAGTTCTAGCTTTTAA
 GTTGGTGGAGTAGGTAGATGGTGGTACCATTGGATACCTGAGAAGGAAGAGGAA
 15 AAGGGAGCAGGTCTCGGGTAAAGATAATGAGTTCAGAGAAAGTAGGCAGGAATT
 CTTTCTCATGCTCACTGACAGTAGACATATGAGAGAAATGCAACTATGTCTCCAT
 GTACAAAAATAAAAATTGTGCCATTATCTGAGTAATTTAGTTTTAAAAATTGTA
 TAATAAAGTACAGTTTTTGCATTAAAATGCTCCTTCAAAGACAAACTCATTTTGC
 ACCAAGCAAAAATGAAGTAAAGAAACCATTTTGTCTATCCCTCATTGATAAGATG
 20 CATAAGTAACAGACTCACAACAACCTTTATTTTTTGTGGGGTGGGTTTGGG

SEQ ID NO: 393

4472 BLOOD:993722.2:X51818 g181036 Human:carbonyl reductase mRNA, complete cds.

25 GCGCCTGCGCGCTCAGCGGCCGGGCGTGTAAACCCACGGGTGCGCGCCACGACC
 GCCAGACTCGAGCAGTCTCTGGAACACGCTGCGGGGCTCCCGGGCCTGAGCCAG
 GTCTGTTCTCCACGCAGGTGTTCCGCGCGCCCCGTTTCAGCCATGTCGTCCGGCAT
 CCATGTAGCGCTGGTGACTGGAGGCAACAAGGGCATCGGCTTGGCCATCGTGCG
 CGACCTGTGCCGGCTGTTCTCGGGGGACGTGGTGCTCACGGCGCGGGACGTGAC
 30 GCGGGGCCAGGCGGCCGTACAGCAGCTGCAGGCGGAGGGCCTGAGCCCGCGCTT
 CCACCAGCTGGACATCGACGATCTGCAGAGCATCCGCGCCCTGCGCGACTTCCTG
 CGCAAGGAGTACGGGGGCTGGACGTGCTGGTCAACAACGCGGGCATCGCCTTC
 AAGGTTGCTGATCCACACCCCTTTCATATTCAAGCTGAAGTGACGATGAAAACAA
 ATTTCTTTGGTACCCGAGATGTGTGCACAGAATTACTCCCTCTAATAAAACCCCA
 35 AGGGAGAGTGGTGAACGTATCTAGCATCATGAGCGTCAGAGCCCTTAAAAGCTG
 CAGCCCAGAGCTGCAGCAGAAGTTCCGCAGTGAGACCATCACTGAGGAGGAGCT
 GGTGGGGCTCATGAACAAGTTTGTGGAGGATACAAAGAAGGGAGTGACCCAGAA
 GGAGGGCTGGCCAGCAGCGCATAACGGGGTGACGAAGATTGGCGTCACCGTTCT
 GTCCAGGATCCACGCCAGGAAACTGAGTGAGCAGAGGAAAGGGGACAAGATCC
 40 TCCTGAATGCCTGCTGCCAGGGTGGGTGAGAACTGACATGGCGGGACCCAAGG
 CCACCAAGAGCCCAGAAGAAGGTGCAGAGACCCCTGTGTACTTGGCCCTTTTGCC
 CCCAGATGCTGAGGGTCCCCATGGACAATTTGTTTCAGAGAAGAGAGTTGAACA
 GTGGTGAGCTGGGCTCACAGCTCCATCCATGGGCCCCATTTTGTACCTTGTCTG
 AGTTGGTCCAAAGGGCATTTACAATGTCATAAATATCCTTATATAAGAAAAAAA
 45 ATGATCTCTTATCAATTAGCACTCACTAATGTACTACTAATTGAGCAACCTACGC
 ACTCAGTTGACTACGTAAATCTGTCAGGTCTTTTGTGATTTCTCTGATGCAGGAG
 AGGAAAAATTGTAATTGATGAAAATAATGAATGAAAATCAACAGATGAATAAAT
 GGTCTTTATAAGTAAAAAAGGG

SEQ ID NO: 394

>4545 BLOOD 234816.2 M31158 g189980 Human cAMP-dependent protein kinase subunit RII-beta mRNA, complete cds. 0

5 GGGGCCCAGTGCGCCGCGCTCGCAGCCGGTAGCGCGCCAGCCGTAGGCGTCGCT
CGGCAGCCGCGGGGCCCTAGGCGTGCCGGGGAGGGGGCGAGGGCGGCCAGGCG
CCTGCCGCCCCGGAGGCAGGATGAGCATCGAGATCCCGGCGGGACTGACGGAGC
TGCTGCAGGGCTTCACGGTGGAGGTGCTGAGGCACCAGCCCGCGGACCTGCTGG
AGTTCGCGCTGCAGCACTTCACCCGCCTGCAGCAGGAGAACGAGCGCAAAGGCA
10 CCGCGCGCTTCGGCCATGAGGGCAGGACCTGGGGGGACCTGGGCGCCGCTGCCG
GGGGCGGCACCCCCAGCAAGGGGGTCAACTTCGCCGAGGAGCCCATGCAGTCCG
ACTCCGAGGACGGGGAGGAGGAGGAGGCGGCCGCCGCGGACGCAGGGGCGTTC
AATGCTCCAGTAATAAACCGATTCAACAAGGCGTGCCTCAGTATGTGCAGAAGCTT
ATAATCCTGATGAAGAAGAAGATGATGCAGAGTCCAGGATTATACATCCAAAAA
CTGATGATCAAAGAAATAGGTTGCAAGAGGCTTGCAAAGACATCCTGCTGTTTA
15 AGAATCTGGATCCGGAGCAGATGTCTCAAGTATTAGATGCCATGTTTGAAAAATT
GGTCAAAGATGGGGAGCATGTAATTGATCAAGGTGACGATGGTGACAACTTTTA
TGTAATTGATAGAGGCACATTTGATATTTATGTGAAATGTGATGGTGTTGGAAGA
TGTGTTGGTAACTATGATAATCGTGGGAGTTTCGGCGAACTGGCCTTAATGTACA
ATACACCCAGAGCAGCTACAATCACTGCTACCTCTCCTGGTGCTCTGTGGGGTTT
20 GGACAGGGTAACCTTCAGGAGAATAATTGTGAAAAACAATGCCAAAAAGAGAA
AAATGTATGAAAGCTTTATTGAGTCACTGCCATTTCCTTAAATCTTTGGAGTTTCT
GAACGCCTGAAAGTAGTAGATGTGATAGGCACCAAAGTATACAACGATGGAGAA
CAAATCATTGCTCAGGGAGATGGGCTGATTCTTTTTTCATTGTAGAATCTGGAG
AAGTGAAAATTACTATGAAAAGAAAGGGTAAATCAGAAGTGGAAGAGAATGGT
25 GCAGTAGAAATCGCTCGATGCTCGCGGGGACAGTACTTTGGAGAGCTTGCCCTG
GTAACATAACAAACCTCGAGCAGCTTCTGCCCACGCCATTGGGACTGTCAAATGTT
TAGCAATGGATGTGCAAGCATTGAAAGGCTTCTGGGACCTTGCATGGAAATTAT
GAAAAGGAACATCGCTACCTATGAAGAACAGTTAGTTGCCCTGTTTGGAACAAA
CATGGATATTGTTGAACCCACTGCATGAAGCAAAAGTATGGAGCAAGACCTGTA
30 GTGACAAAATTACACAGTAGTGTTAGTCCACTGAGGAATGTGTTTGTGTAGATG
CCAAGCATTCTGTGATTTTCAGGTTTTTTCTTTTTTTACATTTACAACGTATCAA
TAAACAGTAGTGATTTAATAGTCAATAGGCTTTAACATCACTTTCTAAAGAGTAG
TTCATAAAAAAATCAACATACTGATAAAATGACTTTGTACTCCACAAAATTATGA
CTGAAAGGTTTATTAATAATGATTGTAATATATAGAAAGTATCTGTGTTTAAGAAG
35 ATAATTAAGGATGTTATCATAGGCTATATGTGTTTTACTTATTCAGACTGATAAT
CATATTAGTGACTATCCCCATGTAAGAGGGCACTTGGCAATTAAACATGCTACAC
AGCATGGCATCACTTTTTTTTATAACTATTAAACACAGTAAAATTTAATCATT
TTGTTTTTAAAGTTTTCTAGCTTGATAAGTTATGTGCTGGCCTTGGCCTATTGGTGA
AATGGTATAAAATATCATATGCAGTTTTTAAACTTTTTATATTTTTGCAATAAAGT
40 ACATTTTGACTTTGTTGGCATAATGTCAGTAACATACATATTCCAGTGGTTTTATG
GACAGGCAATTTAGTCATTATGATAATAAGGAAAACAGTGTTTTAGATGAGAGA
TCATTAATGCATTTTTCCCTCATCAAGCATATATCTGCTTTTTTTTTATTTTGAATT
CTCTGTATTCTATGTCTTTAAAAATTTGATCTTGACATTTAATGTCACAAAGTTTT
GTTTTTTTTTAAAGGTGATTTAACTTAAGATCCGACATTTTTTGTATTCTTTAAG
45 ATTTTACACCTAAAAAATCTCTCCTATCCCAAAAATAATGTGGGATCCTTATCAG
CATGCCACAGTTTATTTCTTTGTTCTTCACTAGGCCTGCATAATACAGTCCTATG
TAGACATCTGTTCCCTTGC GTTCCGTTCTTTCTTAGGATGGTTGCCAACCCACAA
TCTCATTGATCAGCAGCCAATATGGGTTTGTGTTGGTTTTTTAATTCTTAAAAACA
TCCTCTAGAGGAATAGAAACAAATTTTTATGAGCATAACCCTATATAAAGACAA

AATGAATTTCTGACCTTACCATATATACCATTAGGCCTTGCCATTGCTTTAATGTA
 GACTCATAGTTGAAATTAGTGCAGAAAGAACTCAGATGTACTAGATTTTCATTGT
 TCATTGATATGCTCAGTATGCTGCCACATAAGATGAATTTAATTATATTCAACCA
 AAGCAATATACTCTTACATGATTTCTAGGCCCATGACCCAGTGTCTAGAGACAT
 5 TAATTCTAACCAGTTGTTTGCTTTTAAATGAGTGATTTTCATTTTGGGAAACAGGTT
 TCAAATGAATATATATACATGGGTAAAATTACTCTGTGCTAGTGTAGTCTTACTA
 GAGAATGTTTATGGTCCCACTTGTATATGAAAATGTGGTTAGAATGTTAATTGGA
 TAATGTATATATAAGAAGTTAAAGTATGTAAAGTATAACTTCAGCCACATTTTAA
 GAACACTGTTTAAACATTTTTCGAAAACCTTCTTGTAGGAAAAGAGAGCTCTCTAC
 10 ATGAAGATGACTTGTTTTATATTTTTCAGATTTTATTTTAAAAGCCATGTCTGTAA
 CAAGAAAAAACACAAAAGAACTCCAGATTCCTGGTTCATCATTCTGTATTCTTAC
 TCACTTTTTCAAGTTATCTATTTTGTTCATAAACTAATTGTAACTATTTCATGGA
 ACAGCAAACGCCTGTTTAATAAAGAACTTGACCAAGGCTATAAATGCCACGTA
 CATTATTTTCAGTATTGTTGGTTATATTTAAATTTTCCTTACAATAAAGCACACTT
 15 TTATAATAAAATACATGAATTATTGTTTTTCATACTTTTTTGCTTGTTTCTTTAAAG
 TTTTCTGACGTGCATAATGCATAATTCATTGAAAAGCATGATAGCAATGTGGCAT
 GTGGAAGCGAACCCCCAGGGCATAACATAGTAAGAAAGTATGGTTCTGTATGGC
 AATAGGTTTTTAAAATTATTAGCTATTCATCATGTGTGGGAGAAATAATTGTGGT
 GTGTTGCAGATTTATTTGGCCATTTAGAATAACCAAATCAATCTGGCTAACTAGG
 20 AATTTATGTGTAATAATTATCTGATTAAAACAGCTC

SEQ ID NO: 395

>4588 BLOOD 349746.5:L08895 g292289 Human MADS/MEF2-family transcription factor

(MEF2C) mRNA, complete cds. 0

25 GAATTCACAGCTCTCTGCTCGCTCTGCTCGCAGTCACAGACACTTGAGCACACGC
 GTACACCCAGACATCTTCGGGCTGCTATTGGATTGACTTTGAAGGTTCTGTGTGG
 GTCGCCGTGGCTGCATGTTTGAATCAGGTGGAGAAGCACTTCAACGCTGGACGA
 AGTAAAGATTATTGTTGTTATTTTTCTNNNNNNNNNNNNNNNNNNNTAAGAAAG
 GAAAATATCCCAAGGACTAATCTGATCGGGTCTTCCTTCATCAGGAACGAATGCA
 30 GGAATTTGGGAACTGAGCTGTGCAAGTGCTGAAGAAGGAGATTTGTTTGGAGGA
 AACAGGAAAGAGAAAGAAAGGAAGGAAAAAATACATAATTTAGGGACGAGA
 GAGAGAAGAAAAACGGGGACTATGGGGAGAAAAAAGATTCAGATTACGAGGAT
 TATGGATGAACGTAACAGACAGGTGACATTTACAAAGAGGAAATTTGGGTTGAT
 GAAGAAGGCTTATGAGCTGAGCGTGCTGTGTGACTGTGAGATTGCGCTGATCATC
 35 TTCAACAGCACCAACAAGCTGTTCCAGTATGCCAGCACCGACATGGACAAAGTG
 CTTCTCAAGTACACGGAGTACAACGAGCCGCATGAGAGCCGGACAAACTCAGAC
 ATCGTGGAGACGTTGAGAAAGAAGGGCCTTAATGGCTGTGACAGCCAGACCCC
 GATGCGGACGATTCCGTAGGTCACAGCCCTGAGTCTGAGGACAAGTACAGGAAA
 ATTAACGAAGATATTGATCTAATGATCAGCAGGCAAAGATTGTGTGCTGTTCCAC
 40 CTCCCAACTTCGAGATGCCAGTCTCCATCCCAGTGTCCAGCCACAACAGTTTGGT
 GTACAGCAACCCTGTCAGCTCACTGGGAAACCCCAACCTATTGCCACTGGCTCAC
 CCTTCTCTGCAGAGGAATAGTATGTCTCCTGGTGTAACACATCGACCTCCAAGTG
 CAGGTAACACAGGTGGTCTGATGGGTGGAGACCTCACGTCTGGTGCAGGCACCA
 GTGCAGGGAACGGGTATGGCAATCCCCGAAACTCACCAGGTCTGCTGGTCTCAC
 45 CTGGTAACTTGAACAAGAATATGCAAGCAAAATCTCCTCCCCCAATGAATTTAGG
 AATGAATAACCGTAAACCAGATCTCCGAGTTCTTATTCCACCAGGCAGCAAGAAT
 ACGATGCCATCAGTGTCTGAGGATGTCGACCTGCTTTTGAATCAAAGGATAAATA
 ACTCCCAGTCGGCTCAGTCATTGGCTACCCAGTGGTTTCCGTAGCAACTCCTAC
 TTTACCAGGACAAGGAATGGGAGGATATCCATCAGCCATTTCAACAACATATGG

TACCGAGTACTCTCTGAGTAGTGCAGACCTGTCATCTCTGTCTGGGTTTAAACACC
GCCAGCGCTCTTCACCTTGGTTTCAGTAACTGGCTGGCAACAGCAACACCTACATA
ACATGCCACCATCTGCCCTCAGTCAGTTGGGAGCTTGCCTAGCACTCATTTATC
TCAGAGTTCAAATCTCTCCCTGCCTTCTACTCAAAGCCTCAACATCAAGTCAGAA
5 CCTGTTTCTCCTCCTAGAGACCGTACCACCACCCCTTCGAGATACCCACAACACA
CGCGCCACGAGGCGGGGAGATCTCCTGTTGACAGCTTGAGCAGCTGTAGCAGTT
CGTACGACGGGAGCGACCGAGAGGATCACCGGAACGAATTCCACTCCCCCATTG
GACTCACCAGACCTTCGCCGGACGAAAGGGAAAGTCCCTCAGTCAAGCGCATGC
GACTTTCTGAAGGATGGGCAACATGATCAGATTATTACTTACTAGTTTTTTTTTTT
10 TTCTTGCAAGTGTGTGTGTGTGCTATACCTTAATGGGGAAGGGGGGTCGATATGCA
TTATATGTGCCGTGTGTGGAAAAAAAAAAGTCAGGTACTCTGTTTTGTAAAAGT
ACTTTTAAATTGCCTCAGTGATACAGTATAAAGATAAACAGAAATGCTGAGATA
AGCTTAGCACTTGAGTTGTACAACAGAACACTTGTACAAAATAGATTTTAAGGCT
AACTTCTTTTCACTGTTGTGCTCCTTTGCAAAATGTATGTTACAATAGATAGTGTC
15 ATGTTGCAGGTTCAACGTTATTTACATGTAAATAGACAAAAGGAAACATTTGCCA
AAAGCGGCAGATCTTTACTGAAAGAGAGAGCAGCTGTTATGCAACATATAGAAA
AATGTATAGATGCTTGGACAGACCCGGTAATGGGTGGCCATTGGTAAATGTTAG
GAACACACCAGGTCACCTGACATCCCAAGAATGCTCACAAACCTGCAGGCATAT
CATTGGCGTATGGCACTCATTA AAAAGGATCAGAGACCATTA AAAAGAGGACCAT
20 ACCTATTAAAAAAAATGTGGAGTTGGAGGGCTANNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNCTGGGTCTGCATCTCTTATTAAATAAAAAATATAAAAATATGTACAT
TACATTTTGCTTATTTTCATATAAAAGGTAAGACAGAGTTTGCAAAGCATTTGTG
GCTTTTGTAGTTTACTTAAGCCAAAATGTGTTTTTTTCCCTTGATAGCTTCGCT
AATATTTTAAACAGTCCTGTAAAAAACCAAAAAGGACTTTTTGTATAGAAAGCAC
25 TACCCTAAGCCATGAAGAACTCCATGCTTTGCTAACCAAGATAACTGTTTTCTCTT
TGTAGAAGTTTTGTTTTTGAAATGTGTATTTCTAATTATATAAAATATTAAGAATC
TTTTAAAAAATCTGTGAAATTAACATGCTTGTGTATAGCTTTCTAATATATATAA
TATTATGGTAATAGCAGAAAGTTTTGTTATCTTAATAGCGGGAGGGGGGTATATTT
GTGCAGTTGCACATTTGAGTAACTATTTTCTTTCTGTTTTCTTTTACTCTGCTTACA
30 TTTTATAAGTTTAAGGTCAGCTGTCAAAGGATAACCTGTGGGGTTAGAACATAT
CACATTGCAACACCCTAAATTGTTTTTAATACATTAGCAATCTATTGGGTCAACT
GACATCCATTGTATATACTAGTTTCTTTTCATGCTATTTTTATTGTTTTTGCATT
TTTATCAAATGCAGGGCCCCCTTTCTGATCTCACCATTTCACCATGCATCTTGGAAT
TCAGTAAAGTGCATATCCTAACTTGCCCATATTCTAAATCATCTGGTTGGTTTTTCAG
35 CCTAGAATTTGATACGCTTTTTAGAAATATGCCCAGAATAGAAAAGCTATGTTGG
GGCACATGTCCTGCAAATATGGCCCTAGAAACAAGTGATATGGAATTTACTTGGT
GAATAAGTTATAAATTCCACAGAAAGAAAATGTGAAAGACTGGGTGCTAGACA
AGAAGGAAGCAGGTAAAGGGATAGTTGCTTTGTCATCCGTTTTTAATTATTTTAA
CTGACCCCTTGACAATCTTGTGAGCAATATAGGACTGTTGAACAATCCCGGTGTGT
40 CAGGACCCCCAAATGTCACTTCTGCATAAAGCATGTATGTCATCTATTTTTCTTC
AATAAAGAGATTTAATAGCCATTTCAAGAAATCCCATAAAGAACCTCTCTATGTC
CCTTTTTTTAATTTAAAAAATGACTCTTGTCTAATATTCTGTCTATAAGGGATTAA
TTTTCAGACCCTTTAATAAGTGAGTGCCATAAGAAAGTCAATATATATTGTTTAA
AAGATATTTAGTCTAGGAAAGATTTTCTTCTTGGAAATGTGAAGATCTGTCTG
45 ATTCATCTCCAATCATATGCATTGACATACACAGCAAAGAAGATATAGGCAGTA
ATATCAACACTGCTATATCATGTGTAGGACATTTCTTATCCATTTTTCTCTTTTAC
TTGCATAGTTGCTATGTGTTTCTCATTGTAAAAGGCTGCCGCTGGGTGGCAGAAG
CCAAGAGACCTTATTAAGTATAGGCTATATTTTTCTTAACTTGATCTGAAATCCACA
ATTAGACCACAATGCACCTTTGGTTGTATCCATAAAGGATGCTAGCCTGCCTTGT

ACTAATGTTTTATATATTAATAAAAAAAAAATCTATCAACCATTTCATATATATCCC
ACTACTCAAGGTATCCATGGAACATGAAAGAATAACATTTATGCAGAGGAAAAA
CAAAAACATCCCTGAAAATATACACACTCATACACACACACGCACAGGGGAATA
AAATAAGAAAACCATTTTCTCACCATAGACTTGATCCCATCCTTACAACCCATC
5 CTTCTAACTTGATGTGTATAAAATATGCAAACATTTACAAATGTTCTTTGTCATT
TCAAATACTTTAGTATATCAATATCAGTAGATACCAGTGGGTGGGAAAGGGTC.
ATTACATGAAAATATGAAGAAATAGCCATATTAGTTTTTTAACCTGCAATTTGCC
TCAGCAACAAAGAAAAAGTGAATTTTTTAATGCTGAAGATAAAGTAAGCTAAAGT
ACCAGCAGAAGCCTTGGCTATTTATAGCAGTTCTGACAATAGTTTTATAAGAACA
10 TGAAGAGAACAGAATCACTTGAAAATGGATGCCAGTCATCTCTTGTTCCCACTAC
TGAATTCTTATAAAGTGGTGGCAAGATAGGGAAGGGATAATCTGAGAATTTTTTA
AAAGATGATTTAATGAGAAGAAGCACAATTTTGATTGTGATGAGTCACTTTCTGT
AAACAATCTTGGTCTATCTTTACCCTTATACCTTATCTGTAATTTACCATTTATTGT
ATTTGCAAAGCTAGTATGGTTTTTAATCACAGTAAATCCTTTGTATTCCAGACTTT
15 AGGGCAGAGCCCTGAGGGAGTATTATTTTACATAACCCGTCCTAGAGTAACATTT
TAGGCAACATTCTTCATTGCAAGTAAAAGATCCATAAGTGGCATTTTACACGGCT
GCGAGTATTGTTATATCTAATCCTATTTTAAAAGATTTTTGGTAATATGAAGCTTG
AATACTGGTAACAGTGATGCAATATACGCAAGCTGCACAACCTGTATATTGTATG
CATTGCTGCCGTGGAGGCTGTTTATTTCAACCTTTTTTAAAATTGTGTTTTTTAGT
20 AAAATGGCTTATTTTTTCCCAAAGGTGGAATTTAGCATTTTGTAATGATGAATAT
AAAAATACCTGTCATCCCCAGATCATTTAAAAGTTAACTAAAGTGAGAATGAAA
AAACAAAATTCCAAGACACTTTTTTAAAAGAAATGCTCTGCCCTCACACACTTTTATG
GATTGTTTTTTCTTACATACCCATCTTTTAACTTAGAGATAGCATTTTTTGCCCTCT
TTATTTTGTGTTTGTCTTCCAGAGAGTAAACGCTTTGTAGTTCTTTCTTTAAAA
25 AACATTTTTTTTAAAGAAGAAGAAGCCACTGAACCCTCAATAAAGGCTGTTGCC
TAAGCATGGCATACTTCATCTGTTCTCATTGTGCCATCTGCCGTGATGTCGTCAC
TTTTATGGCGTTAATTTCCCTGCCACTACAGATCTTTTGAAGATTGCTGGAATACTG
GTGCTGTAGAAATGCTTCAGACTACAGATGTAATTAAGGCTTTTCTTAATATGT
TTTAACCAAAGATGTGGAGCAATCCAAGCCACATATCTTCTACATCAAATTTTTTC
30 CATTTTGGTTATTTTCATAATCTGGTATTGCATTTTGCCTTCCCTGTTACATACCTCA
AATTGATTCATACCTCAGTTTAATTCAGAGAGGTGAGTTAAGTGACGGATTCTGT
TGTGGTTTTGAATGCAGTACCAGTGTTCTCTTCGAGCAAAGTAGACCTGGGTCACT
GTAGGCATAGGACTTGGATTGCTTCAGATGGTTTGCTGTATCATTTTTCTTCTTTT
TCTTTTCCCTGGGGACTTGTTCATTAAATGAGAGTAATTAATAATCGCTTGTAAT
35 GAGGGCATAACAAGCATTTGCAACAAATATTCAAATAGAGGCTCACAGCGGCATA
AGCTGGACTTTGTGCGCCACTAGATGACAAGATGTTATAACTAAGTTAAACCACAT
CTGTGTATCTCAAGGGACTTAATTCAGCTGTCTGTAGTGAATAAAAGTGGGAAAT
TTTCAAAGTTTCTCCTGCTGGAAATAAGGTATAATTTGTATTTTGCAGACAATTC
AGTAAAGTTACTGGCTTTCTTAGTGAAAAAAA

SEQ ID NO: 396

>4599 BLOOD Hs.71891 gnl|UG|Hs#S5389 H.sapiens mRNA for receptor protein tyrosine
kinase /cds=(353,2920) /gb=X74764 /gi=433337 /ug=Hs.71891 /len=3096

CATCTTGCATCAGCCTGTGGATGTATGCCTACCACCGGGCTCCTTACCAGCAAA
45 GTGGAAAAAGAAGCGTTTCACAACAAATTCTTCTTTTTGGGTTGGGGAAACGCAG
TGGATTATAGCTCTGTTTTCTTCTTTCCAAAACCTGTGCACCCCTGGATGAAACCTC
CATCAAGGGAGACCTACAAGTTGCCTGGGGTTTCAAGTGTCTTAGAAAGTTCCAAG
GTTTGTGGCTTGAATTATTCTAAAGAAGCTGAAATAATTGAAGAGAAGCAGAGG
CCAGCTGTTTTTGAGGATCCTGCTCCACAGAGAATGCTCTGCACCCGTTGATACT

CCAGTTCCAACACCATCTTCTGAGATGATCCTGATTCCCAGAATGCTCTTGGTGCT
GTTCTGCTGCTGCCTATCTTGAGTTCTGCAAAAGCTCAGGTTAATCCAGCTATAT
GCCGCTATCCTCTGGGCATGTCAGGAGGCCAGATTCCAGATGAGGACATCACAG
CTTCCAGTCAGTGGTCAGAGTCCACAGCTGCCAAATATGGAAGGCTGGACTCAG
5 AAGAAGGGGATGGAGCCTGGTGCCCTGAGATTCCAGTGGAACCTGATGACCTGA
AGGAGTTTCTGCAGATTGACTTGCACACCCTCCATTTTATCACTCTGGTGGGGAC
CCAGGGGCGCCATGCAGGAGGTCATGGCATCGAGTTTGCCCCCATGTACAAGAT
CAATTACAGTCGGGATGGCACTCGCTGGATCTCTTGCGGAACCGTCATGGGAA
ACAGGTGCTGGATGGAAATAGTAACCCCTATGACATTTTCCTAAAGGACTTGAG
10 CCGCCCATTTGTAGCCAGATTTGTCCGGTTCATTCCAGTCACCGACCACTCCATGA
ATGTGTGTATGAGAGTGGAGCTTTACGGCTGTGTCTGGCTAGATGGCTTGGTGTC
TTACAATGCTCCAGCTGGGCAGCAGTTTGTACTCCCTGGAGGTTCCATCATTATC
TGAATGATTCTGTCTATGATGGAGCTGTTGGATACAGCATGACAGAAGGGCTAG
GCCAATTGACCGATGGTGTGTCTGGCCTGGACGATTTACCCAGACCCATGAATA
15 CCACGTGTGGCCCGGCTATGACTATGTGGGCTGGCGGAACGAGAGTGCCACCAA
TGGCTACATTGAGATCATGTTTGAATTTGACCGCATCAGGAATTTCACTACCATG
AAGGTCCACTGCAACAACATGTTTGCTAAAGGTGTGAAGATCTTTAAGGAGGTA
CAGTGCTACTTCCGCTCTGAAGCCAGTGAGTGGGAACCTAATGCCATTTCCCTTCC
CCCTTGTCTTGGATGACGTCAACCCCACTGCTCGGTTTGTACGGTGCCTCTCCAC
20 CACCGAATGGCCAGTGCCATCAAGTGTCAATACCATTTTGCAGATACCTGGATGA
TGTTCACTGAGATCACCTTCCAATCAGATGCTGCAATGTACAACAACCTCTGAAGC
CTGCTGCTGCTCTCTCTATGGCACCCAGCAACCTATGATCCAATGCTTAAAGTTGAT
GACAGCAACACTCGGATCCTGATTGGCTGCTTGGTGGCCATCATCTTATECTCCT
GGCCATCATTGTATCATCCTCTGGAGGCAAGTTCTGGCAGAAAATGCTGGAGAAG
25 GCTTCTCGGAGGATGCTGGATGATGAAATGACAGTCAGCCTTTCCCTGCCAAGTG
ATTCTAGCATGTTCAACAATAACCGCTCCTCATCACCTAGTGAACAAGGGTCCAA
CTCGACTTACGATCGCATCTTTCCCTTCGCCCTGACTACCAGGAGCCATCCAGG
CTGATACGAAAACCTCCAGAATTTGCTCCAGGGGAGGAGGAGTCAGGCTGCAGC
GGTGTGTGAAGCCAGTCCAGCCAGTGGCCCTGAGGGGGTGCCCCACTATGCA
30 GAGGCTGACATAGTGAACCTCCAAGGAGTGACAGGAGGCAACACATACTCAGTG
CCTGCCGTCACCATGGACCTGCTCTCAGGAAAAGATGTGGCTGTGGAGGAGTTCC
CCAGGAAACTCCTAACTTTCAAAGAGAAGCTGGGAGAAGGACAGTTTGGGGAGG
TTCATCTCTGTGAAGTGGAGGGAATGGAAAAATTCAAAGACAAAGATTTTGCCCT
AGATGTCAGTGCCAACCAGCCTGTCCTGGTGGCTGTGAAAATGCTCCGAGCAGAT
35 GCCAACAAGAATGCCAGGAATGATTTTCTTAAGGAGATAAAGATCATGTCTCGG
CTCAAGGACCCAAACATCATCCATCTATTATCTGTGTGTATCACTGATGACCCTCT
CTGTATGATCACTGAATACATGGAGAATGGAGATCTCAATCAGTTTCTTTCCCGC
CACGAGCCCCCTAATTCTTCTCCAGCGATGTACGCACTGTCAGTTACACCAATC
TGAAGTTTATGGCTACCCAAATTGCCTCTGGCATGAAGTACCTTTCTCTCTTAAT
40 TTTGTTACCGAGATCTGGCCACACGAACTGTTTAGTGGGTAAAGAACTACACAA
TCAAGATAGCTGACTTTGGAATGAGCAGGAACCTGTACAGTGGTGACTATTACCG
GATCCAGGGCCGGGCAGTGCTCCCTATCCGCTGGATGTCTTGGGAGAGTATCTTG
CTGGGCAAGTTCACTACAGCAAGTGATGTGTGGGCCTTTGGGGTTACTTTGTGGG
AGACTTTACCTTTTGTCAAGAACAGCCCTATTCCCAGCTGTCAGATGAACAGGT
45 TATTGAGAATACTGGAGAGTTCTTCCGAGACCAAGGGAGGCAGACTTACCTCCCT
CAACCAGCCATTTGTCCTGACTCTGTGTATAAGCTGATGCTCAGCTGCTGGAGAA
GAGATACGAAGAACCGTCCCTCATTCCAAGAAATCCACCTTCTGCTCCTTCAACA
AGGCGACGAGTGATGCTGTGAGTGCCTGGCCATGTTCTACGGCTCAGGTCCCTCC
CTACAAGACCTACCACTACCCATGCCTATGCCACTCCATCTGGACATTTAATGA

AACTGAGAGACAGAGGCTTGTTTGCTTTGCCCTCTTTTCCTGGTCACCCCCACTCC
CTACCCCTGACTCATATATACT

SEQ ID NO: 397

5 >4730 BLOOD 345818.4 Y11651 g2125811 Human mRNA for phosphate cyclase. 0
CGGCTCGAGGGCGAACCCGGGGTTCGTTTCTGCTGACTCCAGTGTCCCGAGAGG
CGCCGCTTCTTCCGCTTTCTCGTCAGGCTCCTGCGCCCCAGGCATGAACCAAGGT
TTCTGAACTACTGGGCGGGAGCCAAACGTCTCTTCTTTCTCCCGCTCTGGCGGAGG
CTTTGTCGCTGCGGGCTGGGCCCCAGGGTGTCCCCCATGGCGGGGGCCGCGGGTGG
10 AGGTCGATGGCAGCATCATGGAAGGGGGCGGCCAGATCCTGAGAGTCTCTACGG
CCTTGAGCTGTCTCCTAGGCCTCCCTTTCGCGGTGCAGAAGATCCGAGCCGGCCG
GAGCACGCCAGGCCTGAGGCCTCAACATTTATCTGGACTGGAAATGATTCGAGA
TTTGTGTGATGGGCAACTGGAGGGGGCAGAAATTGGCTCAACAGAAATAACCTT
TACACCAGAGAAGATCAAAGGTGGAATCCACACAGCAGATACCAAGACAGCAG
15 GGAGTGTGTGCCTCTTGATGCAGGTCTCAATGCCGTGTGTTCTCTTTGCTGCTTCT
CCATCAGAACTTCATTTGAAAGGTGGAATAATGCTGAAATGGCACACAGATC
GATTATACAGTGATGGTCTTCAAGCCAATTGTTGAAAAATTTGGTTTCATATTTA
ATTGTGACATTAAAAACAAGGGGGATATTACCCAAAAGGGGGTGGTGAAGTGATT
GTTTGAATGTCACCAGTTAAACAATTGAACCTATAAATTTAACTGAGCGTGGCT
20 GTGTGACTAAGATATATGGAAGAGCTTTCGTTGCTGGTGTGTTTGCCATTTAAAGT
AGCAAAAGATATGGCAGCGGCAGCAGTTAGATGCATCAGAAAGGAGATCCGGG
ATTTGTATGTTAACATCCAGCGGTGTTCAAGAACCTAAAGACCAAGCATTGCGCA
TGGAAATGGAATAATAATTATTGCTGAGACCTCCACTGGCTGTTTGTGTTGCTGGA
TCATCGCTTGGTAAACGAGGTGTAATGCAGACAAAGTTGGAATTGAAGCTGCC
25 GAAATGCTATTAGCAAATCTTAGACATGGTGGTACTGTGGATGAGTATCTGCAAG
ACCAGCTGATTGTTTTTCATGGCATTAGCCAATGGAGTTTCCAGAATAAAAACAGG
ACCAGTTACACTCCATACGCAAACCGCGATACATTTTGCTGAACAAATAGCAAA
GGCTAAATTTATTGTGAAGAAATCAGAAGATGAAGAAGACGCCGCTAAAGATAC
TTATATTATTGAATGCCAAGGAATTGGGATGACAAATCCAAATCTATAGAGTATT
30 TGCCTCTTAAATGATACCTCATTGATATATTGCACTATTTATATAATACTATAAAA
TAATGACTAGGAAGTAACTTATTAAAGGCTATGACTTAAATTTGAAGATGAAGTA
CAGTGTCTAGGTTTGCTGAGAAGGCTTCATTAAATTAATCTCACTTTGAATATCT
CCTGAGAGATGGACAATGAAATATCAGTTGGTGGATATGTGTGATAGCTGATTTT
AATATTGAAGTATTGAAATAAAATATTCTTTACACCTGAAGTAAATACATTTTTC
35 TTTTTTATGTAATTAATTAATCAGGGATATAGATTTGATCTGTAATTTGGGTATA
ATTCTAATCTTTGCTGAAATCACATCTCAAGTATAATGAGGCAACTTTATGCAAA
TGTAATTGTTGTGACAACAATAACA

SEQ ID NO: 398

40 >4830 BLOOD 233438.4 L47345 g992562 Human elongin A mRNA, complete cds. 0
CCAGTTCCGGCGAGGAGGCCGCGCCAGTGACAGCGATGGCGGCGGAGTCGGCGC
TCCAAGTTGTGGAGAAGCTGCAGGCGCGCCTGGCCGCGAACCCGGACCCTAAGA
AGCTATTGAAATATTTGAAGAACTCTCCACCCTGCCTATTACAGTAGACATTCT
TGCGGAGACTGGGGTTGGGAAAACAGTAAATAGCTTGCGAAAACACGAGCATGT
45 TGGAAGCTTTGCCAGGGACCTAGTGGCCCACTGGAAGAAGCTGGTTCCTGTGGA
ACGAAATGCTGAGCCTGATGAACAGGACTTTGAGAAGAGCAATCCCCGAAAGCG
CCCTCGGGATGCCCTGCAGAAGGAGGAGGAGATGGAGGGGGACTACCAAGAAA
CCTGGAAAGCCACGGGGAGCCGATCCTATAGCCCTGACCACAGGCAGAAGAAAC
ATAGGAAACTCTCGGAGCTCGAGAGACCTACAAAGTGTCTCACGGTCATGAGA

GGAGAGATGAGAGAAAGAGGTGTCACAGAATGTCACCAACTTACTCTTCAGACC
CTGAGTCTTCTGATTATGGCCATGTTCAATCCCCTCCATCTTGTACCAGTCCTCAT
CAGATGTACGTCGACCACTACAGATCCCTGGAGGAGGACCAGGAGCCCATTGTT
TCACACCAGAAGCCTGGGAAAGGCCACAGCAATGCCTTTCAGGACAGACTCGGG
5 GCCAGCCAAGAACGACACCTGGGTGAACCCCATGGGAAAGGGGTGTGAGTCAA
AACAAGGAGCACAAATCTTCCCACAAGGACAAACGCCCCGTGGATGCCAAGAGT
GATGAGAAGGCCTCTGTGGTGAGCAGAGAGAGAAATCACACAAGGCCCTCTCCAAA
GAGGAGAACCGAAGGCCACCCTCAGGGGACAATGCAAGGGAGAAACCGCCCTC
TAGTGGCGTAAAGAAAGAGAAGGACAGAGAGGGCAGCAGCCTGAAGAAGAAGT
10 GTTTGCCTCCCTCAGAGGCCGCTTCAGACAACCACCTGAAAAAGCCAAAGCACA
GAGACCCAGAGAAAGCCAAATTGGACAAAAGCAAGCAAGGTCTGGACAGCTTTG
ACACAGGAAAAGGAGCAGGAGACCTGTTGCCCAAGGTAAAAGAGAAGGGTTCT
AACAACCTAAAGACTCCAGAAGGGAAAGTCAAACTAATTTGGATAGAAAGTCA
CTGGGCTCCCTCCCTAAAGTTGAGGAGACAGATATGGAGGATGAATTCGAGCAG
15 CCAACCATGTCTTTTGAATCCTACCTCAGCTATGACCAGCCCCGGAAGAAAAAGA
AAAAGATTGTGAAAACCTTCAGCCACGGCACTTGGAGATAAAGGACTTAAAAAAA
ATGACTCTAAAAGCACTGGTAAAAACTTGGACTCAGTTCAGAAATTACCCAAGG
TGAACAAAACCAAGTCAGAGAAGCCGGCTGGAGCTGATTTAGCCAAGCTGAGAA
AGGTGCCTGATGTGTTGCCAGTGTTGCCAGACCTCCCGTTACCCGCGATACAGGC
20 CAATTACCGTCCACTGCCTTCCCTCGAGCTGATATCCTCCTTCCAGCCAAAGCGA
AAAGCGTTCTCTTACCCCAGGAAGAAGAAGAAGCTGGATTTACTGGGCGCAGA
ATGAATTCCAAGATGCAGGTGTATTCTGGTTCCAAGTGTGCCTATCTCCCTAAAA
TGATGACCTTGCACCAGCAATGCATCCGAGTACTTAAAAACAACATCGATTCAAT
CTTTGAAGTGGGAGGAGTCCCATACTCTGTTCTTGAACCCGTTTTTGGAGAGGTGT
25 ACACCTGATCAGCTGTATCGCATAGAGGAATACAATCATGTATTAATTGAAGAA
ACAGATCAATTATGGAAAGTTCATTGTCACCGAGACTTTAAGGAAGAAAGACCC
GAAGAGTATGAGTCGTGGCGAGAGATGTACCTGCGGCTTCAGGACGCCCCGAGAG
CAGCGGCTACGAGTACTAACAAAGAATATCCAGTTCGCACATGCCAATAAGCCC
AAAGGCCGACAAGCAAAGATGGCCTTTGTCAACTCTGTGGCCAAGCCACCTCGT
30 GACGTCCGGAGGAGGCAGGAAAAGTTTGGAAACGGGAGGAGCAGCTGTCCCTGA
GAAAATCAAGATCAAGCCAGCCCCGTACCCCATGGGAAGCAGCCATGCTTCCGC
CAGTAGCATCAGCTTTAACCCCAGCCCTGAGGAGCCGGCCTATGATGGCCCAAG
CACCAGCAGTGCCCACTTGGCACCAGTGGTCAGCAGCACTGTTTCCTATGATCCT
AGGAAACCCACTGTGAAGAAAATTGCCCAATGATGGCCAAGACAATTAAAGCT
35 TTCAAGAACAGATTCTCCCGACGATAAACTGAGGACTTGCCTTGGAAATGGAATC
TGGGGAGGCAGGAATACAAGGACAGTGGGGGTGGGGAATGGAATTCTACAGG
AGACTGGAGTCTTGCTTTGTGGATCCTTTTGGTCTCCGAGTCTGCAGTCTGCAGG
TGCTGCCCCTGGGAACCTGCGTGCCACAGCCCCGCCTCCCTGCCTGGAGCACACT
TTAGAATTCTGAAGATGTGAAGCCTCTGTCTCACTGAGGATTTTAAAGGTCAATT
40 ATACTTTTGTTGTTTCATTAGCATCTTTGTAACTATAAGACGTAGTTTAAATTAAT
AAATATTGCCCCCAGATTGTATTTATATTATCCCCCAGGTTTGTTTTTGTTTTTGT
CCTCTACCACACATTTAGCCTTTTATCTTCCAGGTCCTTATTAAAATCAGATGAAA
GCCTAGTGAAAGCCAGTCTCCTGCCCCAGCTCAGCTCTGTGTGGACTCTGGTCCA
GACAGAGGACTGGGCATCTCCAGAGCCTGCACAGTACCTGCTGCACGTAGGGCA
45 AGGAATGAGCACTAGACCGCCTGTCCCAAGGGAGCCTCAGTGGGGCGACAGGG
TGCTCGGCGGACTCCACCTCAGGCCCTCCCCACTGTTGCTGTGCATTCTGTGCA
GGTGCATCTCTTTCTTACTAACTGGTATTTATTAAGGCAGGTGCTCTGTAGGTCTG
GAGCCTTTCCTCATCCTTTTTCGAGTCCCCACCNNNNNNNNNNNNNNNNNNNN
NNNGAGGCTCACTAGAGGACGCAGAACCTTGGGAGATTGATTTGCACAGAAGT

CCCCACCTCCCACTTTTACAATTTCCAGTTTCTGATTGAAAATTTTAGGGTTTCTC
 CCCACTGCCCTTCCCTATCTTTCCTTCCCCTCAACACCATGAAGGAAAAACACAC
 ACGGCAGGGCTTTTTGTAGCCCTGAAGGCAACTTTAGACATTTAAAAATCCAGCAC
 TTTAATCTCTTGTTCTCTGTGAATCACTATGAGAAGTGAATGGTTTTAAAGGCTGT
 5 AATGCTATGTTGGAAATTGGTTTGTTCCTTTTATTGAAAAGGTAAGATCATGT
 GATTGGAAGAACAACACTGTTGGCTTGGGAAGAGGACTTTGCTGCTGAAGTGTTT
 TCTACCTTCTGAGTGTGTTTAAGGCAGGATTTGGAGGGAAGGACCAGCTTAGGGA
 GAGTGTCTGAGCCACAGCGTCAGGATGGGGGAAACCATATGGGATCCATCAAGT
 TCCAGTTGAACAGGAGCAAGATCAGAACTTAGGAGGGCAGTGTGCTGCTCCCTTG
 10 TTGGCTGTCAAGGAACACCGATCTAGTAGAAACCCACTTGGTTGTGACCCAGGTA
 GAGGTAGATGCCATACATTTGAGATATGCGTCCTTAAGGAACCTGACAAGCAGA
 CTGAAGGGATGGTAAGTGTGACAGCCTGATAAGTTTTCTCAAAGCCCAGGATAC
 AGAGCCAGTGTTTTCTGTAACCTGGAGACCTCAGTTAGGCCAACTTCGAATTCCAG
 AGCAACGTAGGAAGTCTATTCAGCAGAACTCGACATTGTTGAGTGTGTATTGCT
 15 GTGCAGGGTGCCTATTGTGACAGGACACAAATGTTACTATGTTTTAATTTGCTAT
 ATTTTTGAATGGGTAAAGCATTACTTTACTTCTCTTGGTTACTTGTACCACCATT
 CACCCCTATCCCTAGCCTGCCCCACAAATCTAATATTAGGAAGCCTCTTAAGTGA
 AACCAAAATGAACATTTGGGTCAGGTGCCAGATGTCTGCTGCCTAGAATAGCTTTT
 TCTAGGTGTCTACCACCTTGAATTTATCTCTTAAGTGTGTGTTCAAGTCTTTGTCA
 20 TTGAAACTAGTTTTTCATATCTTAGATTGAGTTGTGTATGATTTAATGTCCCTTAT
 TAGGAGTCTTTAGGCAGGGAGGGAAGAAAAAACAGATTTGTTTCATAGCAATGTC
 AGTATCCATTTTGGCAGATAAAGATTTTGTATGAGCCCTGTTTGCATAGAGCCAG
 ATGTTTTCCCTCCCGCAAGAGTATCTACATCAGGGATGTGACTTGGTGCGAAGA
 ATCAGGGGAAAGAGGAAAAACCCAAATTTCTAAATGACCTCCTTGCCAGCTTACT
 25 AAAATGGCTGCAGAGCAGACACAGGATGAATTTGAACCTGACACAGGATGAATT
 TGAACCTTTGGTCTCATTATGGAATAACTTGTGCAATTTTTTTTCTGTGCTACAC
 TACATACAAATCACCAAAATTACAAATTACCCTTTTGTGATCCTTGGTGTACTGAG
 CAGTTTCTTTGGGGCTTTTTCTTTCTGGGAAGCGGGAGGGAAAGGAGCAAGGTGT
 CATCCTGCTCTTCATTTGTATTTTGGTCCCAAAATGTAAATACAATTTTCTATGTT
 30 ACTTTTTTGTGGTAACTACCGAGATGAATATTTTAATTAGATAAGTTATATGAAA
 AGGAAAATTCCATGTCTAAATAANAAACAAACTCC

SEQ ID NO: 399

>5061 BLOOD 211277.19 AF020351 g2655052 Human NADH:ubiquinone oxidoreductase

35 18 kDa IP subunit mRNA, nuclear gene encoding mitochondrial protein, complete cds. 0
 CGTCCTTTCATCCTGGCGTTTGCCTGCAGCAAGATGGCGGCGGTCTCAATGTCAG
 TGGTACTGAGGCAGACGTTGTGGCGGAGAAGGGCAGTGGCTGTAGCTGCCCTTT
 CCGTTTCCAGGGTTCCGACCAGGTCGTTGAGGACTTCCACATGGAGATTGGCACA
 GGACCAGACTCAAGACACACAACCTCATAACAGTTGATGAAAAATTGGATATCAC
 40 TACTTTAACTGGCGTTCCAGAAGAGCATATAAAAACTAGAAAAGTCAGGATCTTT
 GTTCCTGCTCGCAATAACATGCAGTCTGGAGTAAACAACACAAAGAAATGGAAG
 ATGGAGTTTGATACCAGGGAGCGATGGGAAAATCCTTTGATGGGTTGGGCATCA
 ACGGCTGATCCCTTATCCAACATGGTTCTAACCTTCAGTACTAAAGAAGATGCAG
 TTTCTTTGCAGAAAAAAATGGATGGAGCTATGACATTGAAGAGAGGAAGGTTC
 45 CAAAACCCAAGTCCAAGTCTTATGGTGCAAACTTTTCTTGGAACAAAAGAACAA
 GAGTATCCACAAAATAGGTTGGCACTGACTATATCTCTGCTTGAAGTGAATAAA
 GTCAGCTATGCAGTATTTATAGTCCATGTATAATAAATACATCTCTTAATCTCCTA
 ATAAATTGGACCTTTAAACTAC

SEQ ID NO: 400

>5065 BLOOD 140122.18 AF125099 g5106993 Human HSPC038 protein mRNA, complete cds. 0

5 GGGGCGCCGAGGAGAGCGGCGCGGCGTGCGCGGGCACGAGGCGTAGTGGTCTCC
CCTAAGGCTGAGGCGGCGGCGGGCGCGCGGCGGCGGGCGTGCGAGGCTGTT
GTGCTCCCGGCTCTCGTGTTCCTCTCCTGAGCGGGTGGAGGAGGCCCAAGCGGT
GCTGGGCGCGCTCCCCCTTCCTTTCCCTCCGGCGTCTCTCCCGGCCCTCTCGCGC
TGC ACTGTCTCTCCGACGCAAGACTGTCCCGGCCCGGATATGGCTCGTGGACAGC
10 AGAAAATTCAGTCTCAGCAGAAAAATGCCAAAAAGCAAGCTGGACAAAAGAAG
AAACAAGGACATGACCAAAAGGCTGCTGCCAAAGCTGCCTTAATATATACCTGC
ACTGTCTGTAGGACACAAATGCCAGACCCTAAGACCTTCAAGCAGCACTTTGAG
AGCAAGCATCCTAAGACTCCACTTCCTCCAGAATTAGCTGATGTTTCAGGCATAAG
GTTGTTTACAGGTGAATTCATGACACCTTTGACTCTTCTACTGTCTCAGACCTTAG
GTAACATACCTGCAGCTGCTTTTCTAACAACTGTTGATCAGCAAAAATAAAGGG
15 GCTACAGAAACACTCATTTTTATGCTGTTCCCTCTTGGGCTTCATGCAAAGACAA
TTCTGTGTAAATGTACAGTTGACTCTGATTTGGAAATATGAAAATCAGTCCATCC
TTGTTATAAAAAATTTTTTTACAATTGTAATTATATTGATGTTTCATATTGTGTAAA
ATAACTCATTTAATAAAAATAGTACTTTGATTTACGACATCACAGGATAAATGGTT
TTAGAAATTCTGTTCTAACTTTCCACATTATTTGCCTTATAAAAAATCTAATGAATT
20 CATCAGCTAGAATTGCAAGTGCAATTCTTATATCCCTTTCTCTGCTCAGTGGCAG
GTTCTCAGTTAACTAGAGCAGACTGATTCATTAAAATTGTGCATACGATTTTA
TGGGCGAGCTGATGATCTAGGTGAAAAATGACTTATCTGCTGCCTTAGTATATTGC
GGTTATGTTGTCATTGTACCCCTCTGATCATTTCTCTGTGTTTGAGTTGGAATATTTA
AAAATTGCAGTATGACCTGGNTCTAACTNCCAGTCAGGTGTACCCTGTAGATAACT
25 GATAGCTTCCTAAAAGCGGTTGGATTGTCAGTGAGCCCTTGTGAAAGGTTAGGTT
CTAATGTATATGCCGTAATGAAATAATCATTAAAGCCTATTGTTTAATGCAAAAATA
TGGAACAAATGTGAACTGGTAAAGGTCGATCTTGATACTATATTCTTTGAAAATT
CTTGAAGTTCTTTAATTTGAAATTGAAACATTATTTTTGAGGTTTTTGGAAGTTA
CTATTTGGCCATTTTTACAAATGGATTTTGCATTAAACAGGAAGATTGGAATGACT
30 TGTGGCTGGATTAATTCCCAGAACCCTCTCCCTCCTTTCTTTTCTAAGTGAGTTGT
TGATTTTAGGAGTTTGCTTTGTGCTGTTACCTAAAATCAGAGACTGGTGTACAGT
ATGACTTCCATCTGAACTTGAAAAGTATTAATAATGGGTCAATATTCACATTCTTTT
AGATCTCAGGATGGGAAAATGGGTTTGTTCAGATGGATATGGTAAATCTTACCCA
ATTAAGGAAGGCTAATTTTAGAGTTCTTCTAATTTGCTTGTGTCAACTCTTAACCT
35 GTAAAACCTGCTGTAACTCGGTTTAAATTTTTAAATTAATATAATAGAAAGAACA
CTAAAATACTTACTGGTAACTGCTTAGAGCCATTTATCTGATCCTGTGGATTACA
GAATGCATTCCCTCTTCTGCTGTAGCTTATCATTGCTTTGTTTTGTAGCTCTGCAT
ATTTTGCCACCTTGCTTCCCTGTAAGTTTAAAGACGTTTCCAAGGAAAAGCTTCA
GGGCTGATAGTTTCTTAGCAATTCCTATTCTTATGCCCTTACTTTAAAATAGTCCT
40 TTTATTTTGTGTATTTTATTTCCCTAAGTTTCAGATGTAATATCTGTTGTTTCCTAAC
ATGTCGATTACCAGAACGTTAGAATTTTACCTAATTTCTTGTGGATATTGCAGAA
GTTCTGGTTAAATCACAACCTTAAAAGTTTTTAAAAGTGCTTTGAGCATATGTATA
TGTTTAGTGACAAATCATATAAAACCATTACAAAGTTTTTGGTTTTTTTTTTTCGT
TTGTTTTAGTGACTAATTCAGGATGAAAGTTTTTTTGTCTTGTATTAAACCCTTTT
45 TTATAAGCAGCTGAAGACACCATAATTAACACTATATCTCAGTGATAGGGAAATA
GCTGCATTGATCTTACATGAGCATAATCATCCTTATACTTCATGAGGGGATTATT
AGTACAATCCCCATTTTACTGTGTTTGAGTTAAAAACCAAACATCCCTGTAATTT
AATTTGAAGATTCTTTAACAGATTGCAGCAAAGTTCATTATAAAACTGTTATGGT
GTCTTCAAAGACTTGATAAAATAACACTGAGAGAGAATTGGTCCATTTGTATGCT

GTATTTCTATTACTTGCCAAAAGGAATGGGGTTAAGATTAAACTTGTTTCCATTCT
CTTCACATGGATATACATCCCCATGTTTAACTGACACACTGGGGGCTCAGTTGTG
TGCTGTAATGTCTTATTAAAGAAGATATTAAAGAAAAAAA

5 SEQ ID NO: 401

>5083 BLOOD 1144730.1 AF059524 g4091867 Human reticulon gene family protein
(RTN3) mRNA, complete cds. 0

CTGTCTCGGAGCAGGCGGAGTAAAGGGACTTGAGCGAGCCAGTTGCCGGATTA
TTCTATTTCCCCTCCCTCTCTCCCGCCCCGATCTCTTTTCACCCTTCTCCCACCCT
10 CGCTCGCGTAGCCATGGCGGAGCCGTCGGCGGCCACTCAGTCCCATTCCATCTCC
TCGTCTGCTTCGGAGCCGAGCCGTCGCGCCCCGGCGGCGGGAGCCAGGA
GCCTGCCCCGCCCTGGGGACGAAGAGCTGCAGCTCCTCCTGTGCGGTGCACGATC
TGATTTTCTGGAGAGATGTGAAGAAGACTGGGTTTGTCTTTGGCACCACGCTGAT
CATGCTGCTTTCCCTGGCAGCTTTCAGTGTTCATCAGTGGGGTTTCTTACCTCATCC
15 TGGCTCTTCTCTGTCAACCATCAGCTTCAGGATCTACAAGTCCGTCATCCAAGCT
GTACAGAAGTCAGAAGAAGGCCATCCATTCAAAGCCTACCTGGACGTAGACATT
ACTCTGCTCTCAGAAGCTTTCATAATTACATGAATGCTGCCATGGGGCCCATCA
ACAGGGCCCTGAAACTCATTAT

20 SEQ ID NO: 402

>5105 BLOOD 322303.2 X51602 g31431 Human flt mRNA for receptor-related tyrosine

kinase.0

CACCCAATGCATCACGTACCCCACTGGGCCAGCCCTGCAGCCCAAACCCAGGG
CAACAAGCCCGTTAGCCCGAGGGATCACTGGCTGGCCTGAGCAACATCTCGGGA
25 GTCCTCTAGCAGGCCTAAGACATGTGAGGAGGAAAAGGAAAAAAGCAAAAAG
CAAGGGAGAAAAGAGAAACCGGGAGAAAGGCATGAGAAAGAATTTGAGACGCAC
CATGTGGGCACGGAGGGGGACGGGGCTCAGCAATGCCATTTCACTGGCTTCCCA
GCTCTGACCCTTCTACATTTGAGGGGCCAGCCAGGAGCAGATGGACAGCGATGA
GGGGACATTTTCTGGATTCTGGGAGGCAAGAAAAGGACAAATATCTTTTTTGGAA
30 CTAAAGCAAATTTTAGAACTTTACCTATGGAAGTGGTTCTATGTCCATTCTCATT
GTGGCATGTTTTGATTTGTAGCACTGAGGGTGGCACTCAACTCTGAGCCCATACT
TTTGGCTCCTCTAGTAAGATGCACTGAAAACCTTAGCCAGAGTTAGGTTGTCTCCA
GGCCATGATGGCCTTACACTGAAAATGTCACATTCTATTTTGGGTATTAATATAT
AGTCCAGACACTTAACTCAATTTCTTGGTATTATTCTGTTTTGCACAGTTAGTTGT
35 GAAAGAAAGCTGAGAAGAATGAAAATGCAGTCCTGAGGAGAGGAGTTTTCTCCA
TATCAAACGAGGGCTGATGGAGGAAAAAGGTCAATAAGGTCAAGGGAAAACC
CCGTCTCTATACCAACCAACCAATTCACCAACACAGTTGGGACCCAAAACACA
GGAAGTCAGTCACGTTTCTTTTCATTTAATGGGGATTCCACTATCTCACACTAAT
CTGAAAGGATGTGGAAGAGCATTAGCTGGCGCATATTAAGCACTTTAAGCTCCTT
40 GAGTAAAAAGGTGGTATGTAATTTATGCAAGGTATTTCTCCAGTTGGGACTCAGG
ATATTAGTTAATGAGCCATCACTAGAAGAAAAGCCATTTTCAACTGCTTTGAAA
CTTGCTGGGGTCTGAGCATGATGGGAATAGGGAGACAGGGTAGGAAAGGGCGC
CTACTCTTCAGGGTCTAAAGATCAAGTGGGCCTTGGATCGCTAAGCTGGCTCTGT
TTGATGCTATTTATGCAAGTTAGGGTCTATGTATTTATGATGTCTGCACCTTCTGC
45 AGCCAGTCAGAAGCTGGAGAGGCAACAGTGGATTGCTGCTTCTTGGGGAGAAGA
GTATGCTTCCTTTTATCCATGTAATTTAACTGTAGAACCTGAGCTCTAAGTAACCG
AAGAATGTATGCCTCTGTTCTTATGTGCCACATCCTTGTTTAAAGGCTCTCTGTAT
GAAGAGATGGGACCGTCATCAGCACATTCCCTAGTGAGCCTACTGGCTCCCTGGC
AGCGGCTTTTGTGGAAGACTCACTAGCCAGAAGAGAGGAGTGGGACAGTCCTCT

CCACCAAGATCTAAATCCAAACAAAAGCAGGCTAGAGCCAGAAGAGAGGACAA
 ATCTTTGTTCTTCCTCTTCTTTACATACGCAAACCACCTGTGACAGCTGGCAATTT
 TATAAATCAGGTAAGTGAAGGAGGTTAAACACAGAAAAAAGAAGACCTCAGTC
 AATTCTCTACTTTTTTTTTTTTTTTTCCAAATCAGATAATAGCCCAGCAAATAGTGAT
 5 AACAAATAAAACCTTAGCTATTCATGTCTTGATTTCATAATTAATTCTTAATCAT
 TAAGAGACCATAATAAATACTCCTTTTCAAGAGAAAAGCAAAACCATTAGAATT
 GTTACTCAGCTCCTTCAAACCTCAGGTTTGTAGCATACATGAGTCCATCCATCAGT
 CAAAGAATGGTTCATCTGGAGTCTTAATGTAGAAAAGAAAAATGGGAGACTTGTA
 ATAATGAGCTAGTTACAAAGTGCTTGTTTCATTAAAATAGCACTGAAAATTGAAAC
 10 ATGAATTAAGTGAATAATATCCAATCATTTGCCATTTATGACAAAAATGGTTGGC
 ACTAACAAAGAACGAGCACTTCCTTTTCAGAGTTTCTGAGATAATGTACGTGGAAC
 AGTCTGGGTGGAATGGGGCTGAAACCATGTGCAAGTCTGTGTCTTGTCAGTCCAA
 GAAGTGACACCGAGATGTTAATTTTAGGGACCCGTGCCTTGTTTCCTAGCCCACA
 AGAATGCAAACATCAAACAGATACTCGCTAGCCTCATTAAATTGATTAAAGGA
 15 GGAGTGCATCTTTGGCCGACAGTNGTGTAACNNNNNNNNNNNNNNNNNNNNNNNN
 NNNNNNNNNNNNNNNNNNNNNNNNNNNCGTGTTTTGTGCATAACTATTTAAGGAACTGG
 AATTTTAAAGTTACTTTTATACAAACCAAGAATATATGCTACAGATATAAGACAG
 ACATGGTTTGGTCCTATATTTCTAGTCATGATGAATGTATTTTGTATACCATCTTC
 ATATAATAAAATTAACCTTCCAAAAATGTAAAAAAGAAAAAAAAGGGA

SEQ ID NO: 403

>5125 BLOOD GB_AA069517 gi|1576885|gb|AA069517|AA069517.zf74a12.s1

Soares_pineal_gland_N3HPG

Homo sapiens cDNA clone IMAGE:382654 3' similar to gb:J05252 NEUROENDOCRINE

25 CONVERTASE 2 PRECURSOR (HUMAN); mRNA sequence [Homo sapiens]
 CATCTGCTGAGCGACCGGTCTTCACGAATCATTTTCTTGTTGGAGTTGCATAAAGG
 GGGAGAGGACAAAGCTCGCCAAGTTGCAGCAGAACACGGCTTTGGAGTCCGAAA
 GCTTCCCTTTGCTGAAGGTCTGTACCACTTTTATCACAATGGCCTTGCAAAGGCA
 AGTAGAAGACGCAGCCTACACCACAAGCAGCAGCTGGAGAGAGACCCAGGGT
 30 AAAGATGGCTTTGCAGCAGGAAGGATTTGACCCGAAAAAANGCGAGGTTACAGA
 GNNCATCAATGNGATCGGACATCAACCATGAAACGANCNCTCTTTTT

SEQ ID NO: 404

>5612 BLOOD 997231.12 D86198 g3062805 Human hDPM1 mRNA for dolichol-

phosphate-mannose synthase, complete cds. 0

35 ATCTGGCTCAGTTCCGCCATGGCCTCCTTGGAAGTCAGTCGTAGTCCTCGCAGGT
 CTCGGCGGGAGCTGGAAGTGCGCAGTCCACGACAGAACAAATATTCGGTGCTTT
 TACCTACCTACAACGAGCGCGAGAACCTGCCGCTCATCGTGTGGCTGCTGGTGAA
 AAGCTTCTCCGAGAGTGGAATCAACTATGAAATTATAATCATAGATGATGGAAG
 40 CCCAGATGGAACAAGGGATGTTGCTGAACAGTTGGAGAAGATCTATGGGTCAGA
 CAGAATTCTTCTAAGACCACGAGAGAAAAAGTTGGGACTAGGAACTGCATATAT
 TCATGGAATGAAACATGCCACAGGAACTACATCATTATTATGGATGCTGATCTC
 TCACACCATCCAAAATTTATTCCTGAATTTATTAGCTAATTTATTCTACAGGAAGC
 AAAAGGAGGGTAATTTTGATATTGTCTCTGGAACCTCGCTACAAAGGAAATGGAG
 45 GTGTATATGGCTGGGATTTGAAAAGAAAAATAATCAGAAGATCTGATTGTTTTAT
 TTGGCAGCCGTGGGGCCAATTTTTTAACTCAGATCTTGCTGAGACCAGGAGCATC
 TGATTTAACAGGAAGTTTCAGATTATACCGAAAAGAAGTTCTAGAGAAATTAAT
 AGAAAAATGTGTTTCTAAAGGCTACGTCTCCAGATGGAGATGATTGTTCCGGGCA
 AGACAGTTGAATTATACTATTGGCGAGGTTCCAATATCATTTGTGGATCGTGTTT

ATGGTGAATCCAAGTTGGGAGGAAATGAAATAGTATCTTTCTTGAAAGGATTATT
GACTCTTTTTGCTACTACATAAAAGAAAGATACTCATTTATAGTTACGTTCAATTC
AGGTTAAACATGAAAGAAGCCTGGTTACTGATTTGTATAAAATGTACTCTTAAAG
TATAAAATATAAGGTAAGGTAAATTTTCATGCATCTTTTTATGAAGACCACCTATT
5 TTATATTTCAAATTAATAATTTTAAAGTTGCTGGCCTAATGAGCAATGTTCTCAA
TTTTCGTTTTTCATTTTGCTGTATTGAGACCTATAAATAAATGTATATTTTTTTTTGC
ATAAAGTATTGCTGCCTTAAAAAAA

SEQ ID NO: 405

10 >5707 BLOOD 018945.3 AAC53540.1 g2739105 G protein-coupled receptor 2.6e-86
GGCAAAAAGCATGCAGAAAAAGAAGCAGACGTTTTACATTGGGAATTAATGAAA
GCGTGTCTGCTAGTTTTGGGTAGGAGAACTGGGAAGTTGTTGCTTAAAATTTTAT
ATCACCTCCACAAACAAAACCTCTTCGGAAATGGTAAAATAAGAAAATGCATGAT
TCTAGAGGCATTCCTAAGCACCCACGTGTCGGGCTTTGTGGTGTCTGTGGTATCA
15 TCCGACCGTTTGGACTGGTTAGGGCTTACTGAGAGCTCCATTTCTGGAAAGCCTT
ACAAGACTGAGGAATATCAGACTGCGAATCACCGGGAACGGTTCCTTTGCAGCA
CAGAAGCAATCTCTCTCCCCATCTTCGCATATTCTGATGGCAAAACAAGTGGAAG
AAAAGAGGAAGCATGACTGCAGATCAGATCAGTTCTCTTTGTGGATTATATTTTC
AGTAAAATGTATGGATCTATCTTTTCCTTGTTCTTATATCTAGATCATGAGACTTG
20 ACTGAGGCTGTATCCTTATCCTCCATCCATCTATGGCGAACTATAGCCATGCAGC
TGACAACATTTTGCAAAATCTCTCGCCTCTAACAGCCTTTCTGAAACTGACTTCCT
TGGGTTTCATAATAGGAGTCAGCGTGGTGGGCAACCTCCTGATCTCCATTTTGCT
AGTGAAAGATAAGACCTTGCATAGAGCACCTTACTACTTCCTGTTGGATCTTTGC
TGTTTCAGATATCTCAGATCTGCAATTTTTTCCCATTTGTGTTCAACTCTGTCAA
25 AAATGGTTCTACCTGGACTTATGGGACTCTGACTTGCAAAGTGATTGCCTTTCTG
GGGGTTTTGTCCTGTTTCCACACTGCTTTCATGCTCTTCTGCATCAGTGTCAACAG
ATATTTAGCTATCGCCCATCACCGCTTCTATACAAAGAGGCTGACCTTTTGGACG
TGTCTGGCTGTGATCTGTATGGTGTGGACTCTGTCTGTGGCCATGGCATTTCCTCC
GGTTTTAGACGTGGGCACTTACTCATTATTAGGGAGGAAGATCAATGCACCTTC
30 CAACACCGCTCCTTCAGGGCTAATGATTCTTAGGATTTATGCTGCTTCTTGCTCT
CATCCTCCTAGCCACACAGCTTGTCTACCTCAAGCTGATATTTTTCGTCCACGATC
GAAGAAAAATGAAGCCAGTCCAGTTTGTAGCAGCAGTCAGCCAGAAGTGGACTT
TTCATGGTCCTGGAGCCAGTGGCCAGGCAGCTGCCAATTGGCTAGCAGGATTTGG
AAGGGGTCCCACACCACCCACCTTGCTGGGCATCAGGCAAAATGCAACACCAC
35 AGGCAGAAGAAGGCTATTGGTCTTAGACGAGTTCAAATGGAGAAAAGAATCAG
CAGAATGTTCTATATAATGACTTTTCTGTTTCTAACCTTGTGGGGCCCCCTACCTGG
TGGCCTGTTATTGGAGAGTTTTTGAAGAGGGCCTGTAGTACCAGGGGGATTTCT
AACAGCTGCTGTCTGGATGAGTTTTGCCCAAGCAGGAATCAATCCTTTTGTCTGC
ATTTTCTCAAACAGGGAGCTGAGGCGCTGTTTCAGCACAAACCTTCTTTACTGCA
40 GAAAATCCAGGTTACCAAGGGAACCTTACTGTGTTATATGAGGGAGCATCTGTA
AATCTTTAGCCTTGTGAAAATAACCTTCTCTGCTGAGCAATTGTGGCCCATAGC
CATATTTTGAGAAGAAATTCAAGAATGGAATCAGCAGTTTTAAGGATTTGGGCA
ACATTCTGCAGTCTTTGCAATAGTTCACCTATAATCCTATTTTAAATCTCAGAGTG
ATCCTGCTGACTGCCAGCAAAGGTTTGTAAATTAAGAAGGGACTGAACCACTGCCC
45 TAAGTTTCTTTATGTGGTCAAAAACCTAGATAATGAAAGTAGCAGGTGCTAAGTAT
CAGTGCTAAATGCTCTGTATGTCACTACATATGAAAAACATCAAAAAACAATTA
GCATTGGACATCTTAATAAATTAAGTTGACATGAGGTAAATGTGTTGATAAAAAC
TAATTTTAGAAGTTTGAAGACTTTAAACAG

SEQ ID NO: 406

>5710 BLOOD 024322.1 Incyte Unique

GGTGTCCACCCAGGGCTCCAGAGCCTGCTTCCTGGTTCCTCAAGGGCAGATATTG
GACACTCCTTATTTGTACCAAAGGATGACTGTAGGCCGTGTGCTGGCCTTTCTTT
5 CTAAGAAGCTGCTTTGAGCTCCTGGACTCACCTGAGGCTCCCTGGGGGATGACAC
TCAGTTCTGTCACTGTCAAGGATGCAGAGAGCTGGTGGTAGGTGGGAAGCATGG
TGTCCACCTGCCTGCTGACCACTGGACGCTGCTCCATGCTGAAGAAAAGTGACAG
TCTCCAGGGGACATTTTCAGCCATGCTGAAAGGGAGGCTGGCAGTGGTCATTTGGC
10 CCGGATCTAACATGGCACCTCGTCTCCACAGGGTAGTGGTGGCTGCTTCAACCCA
AATATTATTCAGCTGGTACTAACGACATTGTGCCAGCTGGGACTCTTGGGCTCT
GTGCCTGAGGGAAAATGTTTCACAACTAGTGGCTGCCCAATTGCTGCTGACCAGT
TGTCTTAGAAATGGTCAATTGGATTCAACTTTAGTCCTCTCCTTCCCCCTAAAAGC
GAA

15 SEQ ID NO: 407

>5773 BLOOD 000873.5 AF224741 g6980069 Human chloride channel protein 7 (CLCN7)
mRNA, complete cds. 0

AAACACGGGGGCAGCCGGCGCTTCCCGGCCGGTGTGCTCCGCGGGCGGGCCATG
GCCAACGTCTCTAAGAAGGTGTCCTGGTCCGGCCGGGACCGGGACGACGAGGAG
20 GCGGCGCCGCTGCTGCGGAGGACGGCGCGGCCCGGCGGGGGGACGCCGCTGCTG
AACGGGGCTGGGCCTGGGGCTGCGCGCCAGTCACCACGTTCTGCGCTTTTCCGAG
TCGGACATATGAGCAGCGTGGAGCTGGATGATGAACTTTTGGACCCGGATATGG
ACCCCTCCACATCCCTTCCCCAAGGAGATCCCAACAACGAGAAGCTCCTGTCCCT
CAAGTATGAGAGCTTGGACTATGACAACAGTGAGAACCAGCTGTTCTGAGGA
25 GGAGCGGCGGATCAATCACACGGCCTTCCGGACGGTGGAGATCAAGCGCTGGGT
CATCTGCGCCCTCATTGGGATCCTCACGGGCCTCGTGGCCTGCTTCATTGACATC
GTGGTGGAAAACCTGGCTGGCCTCAAGTACAGGGTCATCAAGGGCAATATCGAC
AAGTTCACAGAGAAGGGCGGACTGTCCTTCTCCCTGTTGCTGTGGGCCACGCTGA
ACGCCGCTTCGTGCTCGTGGGCTCTGTGATTGTGGCTTTCATAGAGCCGGTGGC
30 TGCTGGCAGCGGAATCCCCCAGATCAAGTGCTTCCTCAACGGGGTGAAGATCCCC
CACGTGGTGCGGCTCAAGACGTTGGTGATCAAAGTGTCGGGTGTGATCCTGTCCG
TGGTCGGGGGCTGGCCGTGGGAAAGGAAGGGCCGATGATCCACTCAGGTTTCAG
TGATTGCCGCCGGGATCTCTCAGGGAAGGTCAACGTCACCTGAAACGAGATTTCA
AGATCTTCGAGTACTTCCGCAGAGACACAGAGAAGCGGGACTTCGTCTCCGCAG
35 GGGCTGCGGCCGGAGTGTCAGCGGCGTTTGGAGCCCCCGTGGGTGGGGTCCTGTT
CAGCTTGGAGGAGGGTGCGTCCTTCTGGAACCAAGTTCCTGACCTGGAGGATCTTC
TTTGCTTCCATGATCTCCACGTTACCCCTGAATTTTGTCTGAGCATTACACGG
GAACATGTGGGACCTGTCCAGCCCAGGCCTCATCAACTTCGGAAGGTTTGACTCG
GAGAAAATGGCCTACACGATCCACGAGATCCCGGTCTTCATCGCCATGGGCGTG
40 GTGGGCGGTGTGCTTGGAGCAGTGTTCAATGCCTTGAACCTACTGGCTGACCATGT
TTCGAATCAGGTACATCCACGGCCCTGCCTGCAGGTGATTGAGGCCGTGCTGGT
GGCCGCCGTACAGGCCACAGTTGCCTTCGTGCTGATCTACTCGTCGCGGGATTGC
CAGCCCCTGCAGGGGGGCTCCATGTCCTACCCGCTGCAGCTCTTTTGTGCAGATG
GCGAGTACAACCTCATGGCTGCGGCCTTCTTCAACACCCCGGAGAAGAGCGTGG
45 TGAGCCTCTTCCACGACCCGCCAGGCTCCTACAACCCCTGACCCTCGGCCTGTT
CACGCTGGTCTACTTCTTCTTGGCCTGCTGGACCTACGGGCTCACGGTGTCTGCC
GGGGTCTTCATCCCGTCCCTGCTCATCGGGGCTGCCTGGGGCCGGCTCTTTGGGA
TCTCCCTGTCCTACCTCACGGGGGCGGCGATCTGGGCGGACCCCGGCAAATACGC
CCTGATGGGAGCTGCTGCCAGCTGGGCGGGATTGTGCGGATGACACTGAGCCT

GACCGTCATCATGATGGAGGCCACCAGCAACGTGACCTACGGCTTCCCCATCATG
CTGGTGCTCATGACCGCCAAGATCGTGGGCGACGTCTTCATTGAGGGCCTGTACG
ACATGCACATTCAGCTGCAGAGTGTGCCCTTCCTGCACTGGGAGGCCCCGGTCAC
CTCACACTCACTCACTGCCAGGGAGGTGATGAGCACACCAGTGACCTGCCTGAG
5 GCGGCGTGAGAAGGTGCGGCGTCATTGTGGACGTGCTGAGCGACACGGCGTCCAA
TCACAACGGCTTCCCCGTGGTGGAGCATGCCGATGACACCCAGCCTGCCCGGCTC
CAGGGCCTGATCCTGCGCTCCCAGCTCATCGTTCTCCTAAAGCACAAGGTGTTTG
TGGAGCGGTCCAACCTGGGCCTGGTACAGCGGCGCCTGAGGCTGAAGGACTTCC
GAGACGCCTACCCGCGCTTCCCACCCATCCAGTCCATCCACGTGTCCCAGGACGA
10 GCGGGAGTGCACCATGGACCTCTCCGAGTTTATGAACCCCTCCCCCTACACGGTG
CCCCAGGAGGCGTCGCTCCCACGGGTGTTCAAGCTGTTCCGGGGCCCTGGGCCTGC
GGCACCTGGTGGTGGTGGACAACCGCAATCAGGTTGTGCGGGTTGGTGACCAGGA
AGGACCTCGCCAGGTACCGCCTGGGAAAGAGAGGCTTGGAGGAGCTCTCGCTGG
CCCAGACGTGAGGCCCAGCCCTGCCCATAATGGGCACTGGCGCTGGCACCCCGG
15 CCCTTCTGCATTTCTCCCGGAGTCACTGGTTTCTCGGCCCAAACCATGCTCCCCA
GCAGTGGCAATGGCGAGCACCTGCAGCTGGGCGGGCAGGCGGCAGGCGCGGA
ACTGACCCTCTCGCGGGACTGACCCTGTTGTGGGCAGTGGTCTCCCCCCTTGGCG
CCTCCTTGCGCAGGCCAGCCTCCACTCTCCTCGTCTAGGTTTCTTTACCTCCAGG
GATCAGCTGTGTGTGTGTGACCTCCCTACCGGGCTATCGGCCTCTTGGGAGCCAG
20 CGGCAGGGCCGGCACCTGCGTGCCTGTGCCCGTGTGCGTGAGACAGAGCCCTTG
CCCCTGCTGCTGCCCCGAGGGCTGCCCTGCCCTGGAAGGGCCCCCTCTGCCTCCAC
AGCAGTGGAGTCTTGAGACTTGGGAGCTGCTTGGCCTCATTTTCAGCCATGAGC
AGACGGCCTGTGGTCCCTGGGCGCTGAGGCACGGACTGCTAGCACCAAGGGTTTGG
AGGCTGCGACCGCCCCGGAGAGCAGCTTCACACTGGCGCCACAGAGGAGCCCCA
25 CGTGCACTCCCCGGCCTGCATCCGGCTTGGGTACACAGGCCCCAGAGGACTGGGG
TGACTCACGGGCCCTGTGCTGTGATGTTGAGAGCTGAGAAAAACCTCCAAGGCC
CTGAGCCCCATGCCAGCCCTGCCTTGGTCCCCCAATCCCCAGAGCTTGGAGTCT
GGGCCCCACACCCAGCCCTGCCTTGGTCCCTGAGCCTCAGAGCGTGGAATTGCTG
CCCTGTGGACACTGGCTGGGAAGGCAGGTCTTCCCCTAGCACATGGGGACCCCG
30 GCCTCGAGGGTGACCTCCCTACCTTGCCCCTGCCAGCCACCAAGCGCAGGTGCAG
CGGGGGCCAGACTCCTGCCGGCCTCAGAGGACACCTGGCCCAGCACAGGCAGCT
AGAAGGGCCGGTGGGCACCGGGGGCCGGGAAGCCCCACCTCACCACCTGAGGGC
CCCTGGGAGGCTCCTCTGGCCTGGCTGGGCTGGGTCTGGGGCCGCCACAGGCCCC
TCACGGGGCGGCAGAGGCAACTTCAGTGTCCCTGTTAGAGCAACACGGGTCCCT
35 CCGTGGGGGGCTGGGTGCGGCCCCCTGCCGTGATTTCTCCCCAGGGAGTGGGG
CCTCCCCGGGAGCTGACGCCACCACCCTGCTTAGCCCTCACAGGGCCCCAAGGTG
TCCGAGTGTGTTGGGTCTGAACGCGAAATAAAGAAATCCTCTCAGCCCGCCTTTG
CCAGCGTCGTCCCTCCCACCCACCCAGACCAGTCCAACAGCCTGGGACTTTTCG
GGACCCTGGGGTTCGGGGCACCGTGTGGAGTGAGACAGGCGTGAAAGACAGCGG
40 CTGCGGCCACCCAGGGCACCAACATCCTCTTCCTCGTCCCCGCCCTCAGCC
TCCCTCCTCTGGCTCCTGGCTGGTGGGTCTGGGGGCAAGGCAGAGGCGCTCCAGG
TGGAGGGGGGCGGGCCGGGGTGCCACGCTGGGGTGACGCAAGAAGAAAATC
CCGGGCCTCAGAGTCGGCGCCGAAACCTAGGTCTGGGTTTCCCTCGTGGTGGTT
GTGTACTGAGGACCTGGAAGTGATCATATTCTGGATCTCTTCGGTTAAATAAAAT
45 CAGCGGTTAGGATTCACAAAAA

SEQ ID NO: 408

>5777 BLOOD 335198.1 X89066.1 g1370118 Human mRNA for TRPC1 protein. 0

GAGGCAGCAGTGGGAACGACTCATCCTTTTTCCAGCCCTGGGGCGTGGCTGGGGT
CGGGGTCGGGGTCGGGGCCGGTGGGGGGCCCCGCCCCGCTCTCCTGGCCTGCCCC
TTCATGGGCCGCGATGATGGCGGCCCTGTACCCGAGCACGGACCTCTCGGGCGCC
TCCTCCTCCTCCCTGCCTTCCTCTCCATCCTCTTCCTCGCCGAACGAGGTGATGGC
5 GCTGAAGGATGTGCGGGAGGTGAAGGAGGAGAATACGCTGAATGAGAAGCTTTT
CTTGCTGGCGTGGCACAAGGGTGACTATTATATGGTTAAAAAGATTTTGGAGGAA
AACAGTTCAGGTGACTTGAACATAAATTGCGTAGATGTGCTTGGGAGAAATGCT
GTTACCATAACTATTGAAAACGAAAACCTTGGATATACTGCAGCTTCTTTTGGACT
ACGGTTGTGAGTCTGCAGATGCACCTTTTGGTGGCAATCGACTCTGAAGTAGTGGG
10 AGCTGTTGATATACTACTTAATCATCGACCAAAACGATCATCAAGACCAACTATA
GTAAAACTAATGGAACGAATTCAGAATCCTGAGTATTCAACAACCTATGGATGTTG
CACCTGTCATTTTAGCTGCTCATCGTAACAACCTATGAAATTCTTACAATGCTCTTA
AAACAGGATGTATCTCTACCCAAGCCCCATGCAGTTGGCTGTGAATGCACATTGT
GTTCTGCAAAAAACAAAAAGGATAGCCTCCGGCATTCCAGGTTTCGTCTTGATAT
15 ATATCGATGTTTGGCCAGTCCAGCTCTAATAATGTTAACAGAGGAGGATCCAATT
CTGAGAGCATTGAACTTAGTGCTGATTAAAAAGAACTAAGTCTTGTTGGAGGTGG
AATTCAGGAATGATTATGAGGAACTAGCCCGGCAATGTAAAATGTTTGCTAAGG
ATTTACTTGCACAAGCCCGGAATTCTCGTGAATTGGAAGTTATTCTAAACCATAC
GTCTAGTGACGAGCCTCTTGACAAACGGGGATTATTAGAAGAAAGAATGAATTT
20 AAGTCGTCTAAAACTTGCTATCAAATATAACCAGAAAGAGTTTGTCTCCCAGTCT
AACTGCCAGCAGTTCCTGAACACTGTTTGGTTTGGACAGATGTCAGGTTACCGAC
GCAAGCCCACCTGTAAGAAGATAATGACTGTTTTGACAGTAGGCATCTTTTGGCC
AGTTTGTCACTTTGTTATTGATAGCTCCCAAATCTCAGTTTGGCAGAATCATTCT
ACACACCTTTTATGAAATTTATCATTTCATGGAGCATCATATTTACATTTCTGCTG
25 TTGCTTAATCTATACTCTCTTGCTCTACAATGAGGATAAGAAAAACACAATGGGGC
CAGCCCTTGAAAGAATAGACTATCTTCTTATTCTGTGGATTATTGGGATGATTTG
GTCAGACATTAAAAGACTCTGGTATGAAGGGTTGGAAGACTTTTTAGAAGAATCT
CGTAATCAACTCAGTTTTGTCATGAATTCTCTTTATTTGGCAACCTTTGCCCTCAA
AGTGGTTGCTCACAACAAGTTTCATGATTTTGCTGATCGGAAGGATTGGGATGCA
30 TTCCATCCTACACTGGTGGCAGAAGGGCTTTTTGCATTTGCAAATGTTCTAAGTTA
TCTTCGTCTCTTTTTTATGTATACAACCAGCTCTATCTTGGGTCCATTACAGATTTT
AATGGGACAGATGTTACAAGATTTTGGAAAATTTCTTGGGATGTTTCTTCTTGTTT
TGTTTTCTTTCACAATTGGACTGACACAACCTGTATGATAAAGGATATACTTCAAA
GGAGCAGAAGGACTGTGTAGGCATCTTCTGTGAACAGCAAAGCAATGATACCTT
35 CCATTCGTTTCATTGGGCACCTGCTTTGCTTTGTTCTGGTATATTTCTCCTTAGCGC
ATGTGGGCAATCTTTGTCACAAGATTTAGCTATGGAGAAGAAGTGCAGTCCTTTG
TGGGAGCTGTCATTGTTGGTACATACAATGTCGTGGTTGTGATTGTGCTTACCAA
ACTGCTGGTGGCAATGCTTCATAAAAGCTTTTCTAGTTGATAGCAAATCATGAAGAC
AAAGAATGGAAGTTTGCTCGAGCAAATATATGGCTTAGCTACTTTGATGACAAAT
40 GTACGTTACCTCCACCTTTCAACATCATTCCCTCACCAAAGACTATCTGCTATATG
ATTAGTAGCCTCAGTAAGTGGATTTGCTCTCATACATCAAAAGGCAAGGTCAAAC
GGCAAAACAGTTTAAAGGAATGGAGGAATTTGAAACAGAAGAGAGATGAAAC
TATCAAAAAGTGATGTGCTGCCTAGTGCATCGTTACTTGACTTCCATGAGACAGA
AGATGCAAAGTACAGATCAGGCAACTGTGGAAAATCTAAACGAACTGCGCCAAG
45 ATCTGTCAAAATTCGAAATGAAATAAGGGATTTACTTGGCTTTTCGGACTTCTAA
ATATGCTATGTTTTATCCAAGAAATTAACCATTTTCTAAATCATGGAGCGAATAA
TTTTCAATAACAGATCCAAAAGACTATATTGCATAACTTGCAATGAAATTAATGA
GATATATATTGAAATAAAGAATTATGTAAAAGCCATTCTTTAAATATTTATAGC
ATAAATATATGTTATGTAAAGTGTGTATATAGAATTAGTTTTTAAACCTTCTGTT

AGTGGCTTTTTGCAGAAGCAAAACAGATTAAGTAGATAGATTTTGTAGCATGCT
 GCTTGGTTTTCTTACTTAGTGCTTTAAAATGTTTTTTTTATGTTTAAGAGGGGCA
 GTTATAAATGGACACATTGCCCGAGAATGTTTTGTAAAATGAAGACCAGCAAATGT
 AGGCTGATCTCCTTCACAGGATACACTTGAAATATAGAAGTTATGTTTTAAATAT
 5 CTCTGTTTTAGGAGTTCACATATAGTTCAGCATTTATTGTTTAGGAGTATAATTTT
 ATTTTATCTAAAATAATAGTCTATTTTTCTTTTGTATTTTGTATAATCTTAAGCA
 ACAAAGAAAAAACCTAATATTTGAATCTATTTATGTCTTTCAATTTAAATTCACT
 TCAGTTTTTGTATTGTAAATATATTTACTTTTACATGGTTATAATCACTTTATATTT
 TTAATGTTTTTTTCACTTAATATTTTATATATACATTTCCATGTATTGATGTAGTTA
 10 GTCCACATTTAAATTTTTATAGAATTATATAGTTTTTGA AAAAATACAGTCAGTAG
 ATGTTTTATTTTTTAGCTATTCAGTTATGTTTATAAGTTTGCATAGCTACTTCTCGA
 CATTTGGTTTGTTTTAATTTTTTTGTATCATAATAGTCCTATTTTTTTTTCAAGTTG
 GAGTGAATGTTTTTAGTTTTAAGATAGATAGGAGACACTTTTTTATCACATGTAG
 TCACAACCTGTTTTGTTTTGTAAAACATAGGAAGTCTCTTAATGCAATGATTTG
 15 TTTTATATTTGGACTAAGGTCTTGAGCTTATCTCCCAAGGTACTTTCCATAATTT
 AACACAGCTTCTATAAAAGTGACTTCATGCTTACTTGTGGATCATTCTTGCTGCTT
 AAGATGAAAAGCATTGGTTTTTTTAAAATTAGAGAATAAAATATGTATTTAAATTT
 TTGGTGTGTTACATAAAAGGGATGTAGCTAAAATGTTTTTCATAGGCTATTATATA
 TTCTCGCAGCATTTCCAGTTAAGAGGATATTAGGTATATAATTCTCTTCTTAACCG
 20 AATGTCAGATGGTCTTACGCCACAGGGTGCAGGTAACCCTTGGTCTGTAAGCACC
 ACCGATCCAGGGATCATTGTCTAAATAGGTTACTATTGTTTGTTCATCTTGCTTT
 TGCATTTTTATTTTTTAAATTTCCAAATTTTAAAGTGTTCCCTCTTTGGGGGCAAAATCT
 TATAAAAATGTTTATTGTAAAGTATATATTTTGTCTACGATGGGATTATGCACTT
 CCCAATTGGGATTTTACATCTGGATTTTATGTCATTCTAAAAAACACCTAATTATT
 25 AAAACATTTATAGAGTGCCTACTGTATGCATGAGTTGAGTTGCTTCTGAGGTACA
 TTTTGAATGACAGCATATTGTAGAAAAAAAAGGTGAATAAAATTTGACATTAG
 ATTATAAAAAAAAAGGAATTC

SEQ ID NO: 409

30 >5806 BLOOD 978358.7 U73304 g1657840 Human CB1 cannabinoid receptor (CNR1)
 gene, complete cds. 0
 CTTCTGTTTCTCACCATTCCGGCTTATTTGTTTTCCCTCCTCTTAGGATTGCCCCCT
 GTGGGTCACTTTCTCAGTCATTTTGAGCTCAGCCTAATCAAAGACTGAGGTTATG
 AAGTCGATCCTAGATGGCCTTGACAGATACCACCTTCCGCACCATCACCCTGACC
 35 TCCTGTACGTGGGCTCAAATGACATTCAGTACGAAGACATCAAAGGTGACATGG
 CATCCAAATTAGGGTACTTCCCACAGAAATCCCTTTAACTTCCTTTAGGGGAAG
 TCCCTTCCAAGAGAAGATGACTGCGGGAGACAACCCCCAGCTAGTCCCAGCAGA
 CCAGGTGAACATTACAGAATTTTACAACAAGTCTCTCTCGTCCTTCAAGGAGAAT
 GAGGAGAACATCCAGTGTGGGGAGAACTTCATGGACATAGAGTGTTTCATGGTC
 40 CTGAACCCAGCCAGCAGCTGGCCATTGCAGTCTGTCCCTCACGCTGGGCACCT
 TCACGGTCTTGAGAACTCCTGGTGCTGTGCGTCATCCTCCACTCCCGCAGCCT
 CCGCTGCAGGCCTTCTACCACTTCATCGGCAGCCTGGCGGTGGCAGACCTCCTG
 GGGAGTGTCATTTTTGTCTACAGCTTCATTGACTTCCACGTGTTCCACCGCAAAG
 ATAGCCGCAACGTGTTTCTGTTCAAACCTGGGTGGGGTCACGGCCTCCTTCACTGC
 45 CTCCGTGGGCAGCCTGTTCTCACAGCCATCGACAGGTACATATCCATTACAGG
 CCCCTGGCCTATAAGAGGATTGTCACCAGGCCCAAGGCCGTGGTGGCGTTTTGCC
 TGATGTGGACCATAGCCATTGTGATCGCCGTGCTGCCTCTCCTGGGCTGGAACCTG
 CGAGAACTGCAATCTGTTTGCTCAGACATTTTCCACACATTGATGAAACCTAC
 CTGATGTTCTGGATCGGGGTACACAGCGTACTGCTTCTGTTTCATCGTGTATGCGTA

CATGTATATTCTCTGGAAGGCTCACAGCCACGCCGTCCGCATGATTCAGCGTGGC
ACCCAGAAGAGCATCATCATCCACACGTCTGAGGATGGGAAGGTACAGGTGACC
CGGCCAGACCAAGCCCGCATGGACATTAGGTTAGCCAAGACCCTGGTCCTGATC
CTGGTGGTGTGATCATCTGCTGGGGCCCTCTGCTTGCAATCATGGTGTATGATGT
5 CTTTGGGAAGATGAACAAGCTCATTAAGACGGTGTTCATTCTGCAGTATGCTC
TGCCTGCTGAACTCCACCGTGAACCCCATCATCTATGCTCTGAGGAGTAAGGACC
TGCGACACGCTTTCCGGAGCATGTTTCCCTCTTGTGAAGGCACTGCGCAGCCTCT
GGATAACAGCATGGGGGACTCGGACTGCCTGCACAAACACGCAAACAATGCAGC
CAGTGTTACAGGGGCCGAGAAAGCTGCATCAAGAGCACAGTCAAGATTGCCAA
10 GGTAACCATGTCTGTGTCCACAGACACGTCTGCCGAGGCTCTGTGAGCCTGATGC
CTCCCTGGCAGCACAGGAAAAGAATTTTTTTTTTTAAGCTCAAAATCTAGAAGAG
TCTATTGTCTCCTTGGTTATATTTTTTTAACTTTACCATGCTCAATGAAAAGGTGA
TTGTCACCATGATCACTTATCAGTTTGCTAATGTTTCCATAGTTTAGGTACTCAA
CTCCATTCTCCAGGGGTTTACAGTGAAGAAAGCCTGTTGTTAAGTGACTGAACG
15 ATCCTTCAAAGTCTCAATGAAATAGGAGGGAAACCTTTGGCTACACAATTGGAA
GTCTAAGAACCCATGGAAAAATGCCATCAAATGAATAATGCCTTGTAACCACAA
CTTTCACATAATGTGAAATGTAAGTGTCCGTAGTATCAGAGATGTCCATTTTTAC
AAGTTATAGTACTAGAGATATTTTGTAAAATGTATTATGTCCTGTGAGATGTGTA
TCAGTGTATATGTGCTATTAATATTTGTTTAGTTCAGCAAACTGAAAGGTAGAC
20 TTTTATGAGAACAATGGACAAGCAGTGGATACGTGTCAATGTGTGCACTTTTTTT
CTATATTATTGCCCATGATATAACTTTAGAAATAAACCTTAATATTTCTTCAAATA
TCTCTATTTAATTTTGACACTGAAATAACCGTAAAGGTTTATTTTTCTGTTACCTC
TAAACAAGAAGAATTTGAAGACTTCAAAATATTGAGCAGAATTCATTCATACCTAA
AAATTTATTAGCCCTGCATTTTCATAGGAAGACACATTATCTTCTGGACTATAGCT
25 GTTCTAATGGATTATAATCAGAATGGAAGAGAGAAAGCATATTGACTTTTTTTGA
GCGACATCTCTGACTTTCTTTAGTCTTTAGCTATTACTGGATCTCTTAAGACAGCA
TGTGTTAATCTTAATGTATATCGTTATCACTGTGCAGTTGCTGTTTACTTGAATAG
TATTGTGTTCCCTATATTCCAGGTTTAAGTAGATTTTCATGCCTGGGTGGCCAAACA
ACAGTCTTCATTTTTTTTTAATTGAAAAGAAGTAGTGTCTGGATCAGTAAAATTAT
30 ACTGTGTGTGAGTGTGAATATAAATGTGTGTATGTGTGTTTCTGTCCGTAAGTGT
ACAGTAATGTCATAAAGTGAGAAAAGTGTGACCAAGTATAAACTTTTACCACTTG
CTGCACTCTTGACATGGATTTCAGTTTCTAAAATTGAGTTCTTCTGTAATCTTGT
TGATAAAAATACTGACTCCAACCATTCAAAAATTTACCCCATCCCTCCTTAAGA
GATTGGATCAAGTATTACTAAATTGACCTTTAGGTATTACACAAGACCAGTGCTT
35 AGCAAAAAATAATGACAGGCATCCAAGGAAGGGATGTATTTGTAGTGTTATTGC
CAGGAAAGGAGAGTACTTTGGTTTCTGAGCACCGAATATTGAGCAATATGTCAGT
CACTAAAAGGAAGACAGTTCTACAGAAAAACAATGGTAACATTTTTCAATAGCG
TGTGTAGATAGTATGCACTATATACATCACGTTAAAGTAGGACTATCACACCCAG
CCCATGTGGCTAAAAAAGCTGAATCAGACAGTGGATGAGACACACAACGGCAGT
40 GAAGAACCGATACACTTGGCATTGACGTCTAGCTATGCTGTATCTGTGCTTTGCC
CACATGCCCTTGGTGACAGCTGAGCACCCAGCTCTGTCTTGGTAGGTTTGGGCTA
AGGAACAAATCTCTCCTTTGCTCGTGGTTAGCAAGATACACTCAAGCATGAAGAT
AAACACAGCTGCTTTCTTCTACACCCGGTCTCATGCTCCTTAATGGCGCCATGGG
TGCTTGTGGGCTTTTTCCAGTAAGGAATGATATTGCTGAAGAATCTACTTAAC
45 CCTGACAAATTTAATTATAATCTCTTCTTATACAGATAAAACATGACTCCTACA
AGGCCCAAGGTTTACATAGTCTGAAGTGAAGTACAGAGCTGGCATCTATCTGGT
GATTTCTAGCTCTCGAGATACCCAAGCAGCCTGATGGGGCAGTTCCCCTTCTTAC
GGTTCACGCTCTAAGGCAGGATGTGGCTTATGAGATACTTTGCATTGTCTGTCTG
CACACCTTGAATCTGCCTGCTGGCTCCCTTACTTTACCTCTCTGTCTATGTGCAGAT

GAAGGCTCAGGGTGCTAGAGGATTAGTAAGATCTCTTTCTAAAGACAGGAGAGA
 TTATTTACAAGAAGAAGCTCACCAGGGTTTAGTTTGCATTTAAGAATTGCCAGTCT
 TTTGTCCTGCATCATCTTGAACATTAATCCACATGTTTCAGAGCTCACCAGGCAGT
 ACCAATGCTCTTTTCACAGCTATGAAGAGCTAGAGAAATTCTTGTTATGGTAGAA
 5 AAATTTACAGATTCATTTTTGAAACTGCATTTGTGCGTATGCAGTGTAGATTTTAT
 AGTGTGTTGTGCTTTCAAGATCTAAATCATATATAATAAATTAAGGGACAATGGG
 GCTGACAGCACTAAACTTGGTGCTTATTGATATTCTAAGAAATATCTGTGAAATA
 TCATCACGTATGTTATACAACCTTCATTTAAAAAGGTTTAAAACTAGTTAGATTC
 ACTTTGACACTTTTTCATATCATTTCTTAACCCAAGTGACGAAAACATTGTCCCCAA
 10 TGAATATACTCATTAGAATTACCATTTGTTAATATCACTCATTAAATTAACCCATA
 ATTAGATCCATTAATTTAAATGATTTAAATTTAAGTAAGTTTTATAAGGTCTGAC
 ATCAGAGGTATCTTACTTTCTCTGAGGATGATGTACTTGCCCTGACCATGCATTT
 TACCATCACACATGTTTCAAGAAAGGGCCAAATTCCCAACCTGCTCATTTTTTTTTT
 ATCAGAGTCATGATGAATCAGTCCTAGAATGTTTCATTTGCACAAGTAGGGCTGC
 15 CTCCAAGAGGAACCTCTGATTTATTTTGTATGAAATATATGTGAAAGGATATGAA
 TCTGAGAGATGCTGTAGACATCTGTCCTACACTTGAGATGATTTCCAAGCCTCTC
 TGGCACTTTGAGTTAAGTCTATCTGGTATTAATGCCAAGGACCTTTTGCTGCCTA
 AATCCACTCTGCAGGAAATAGGCCCAACCACAGATGAGAATTAGGCCCTGGAT
 GAGTAGCGCTATAGTTACTGTCCTGTTGATTAATTTCTGCCATTTTCATGTCCATAA
 20 AAGAGACCACCCATATCATGCACACAATTAGATTTCTCACACTCTAACTGTATAT
 TTGTATGATATTTTAAATCTCCTAAATGCTGGGCAATGGCTATTAACAATTAATT
 TGTCTTGCACTGGGCCTTCTGATGAAATGTTAACAATGCCTATTGTAATATAGAAA
 TTTTAAACATTCTATCTACTGATTTGGGCTGAATGTATGTAATAGGTTTCTAAAAAG
 TCTGAGATGTTTGAGCAGTGGCCTACAAATCAGTAATTTTCGGATGGGAGAGTTTCT
 25 TTACATTGCCGTGGCATCTTAAAAGCTATCTTCATGTAAATTGACTGTACTAGGC
 CTACTGGGGATCAGAGTTCCCAAGAAAGGAAACCTTTTCTTGTATCTGGATTCAA
 ATTTATTTCCAATGTTTCAAGCGGGAAACATGACTCTTTATTGTCTGTAAATCTAA
 CATTATTACTTTTCTCTTAGAAGAATATTGTATTGTTAGATGTTTGTGAGCTGG
 TAACATCGTTGCAACCACTGCAATATCTTCGTTAGTAATCTGTATAATACTTTGTA
 30 TACAAGTACTGGTAAGATTGTTATTAATGTAGCTTCAGTCATTAAATTACTATA
 GCAAAGTAGTACTTCTTCTGTAATATTTACAATGTATTAAGCCCACAGTATATTTT
 ATTTCAATGTAATTAACCTGTAACTTATTCAAAGAGAGAAAACATCTCATCATGTC
 TATTGTCCAAAGTTACCTGGAATCAAATAAAAAATTCTAGATTACCATGAAGAAC
 ATAAAATGCCTTTGAACTCTGCCTTATTTACAGTCTGATGGCAAAATACTAAGG
 35 ATTTAATTTCTAAAAGATTGCTGAACTAATTTATTCCTCAAAAAGCACTAATGAC
 TACTTGAAAAGTGGGGACATATTGGATT

SEQ ID NO: 410

>5824 BLOOD 228699.5 X92106 g1321857 Human mRNA for bleomycin hydrolase. 0

40 CCGAGCCGGTTTCTTTTCCGGCGCTCCGGGTGCGAGAGACAGGTCGGGCCCCC
 TAGGCAGCGAGCCGCAGCGCAATCCCGGCGCTCGCCCAAGGACCCTGGAAGCTA
 CCGTTACCCCGCCGGGCAGCGTGGGCGCCATGAGCAGCTCGGGACTGAATTCGG
 AGAAGGTAGCTGCTCTGATACAGAACTGAATTCCGACCCCCAGTTCGTACTTGC
 CCAGAATGTCGGGACCACCCACGACCTGCTGGACATCTGTCTGAAGCGGGCCAC
 45 GGTGCAGCGCGCGCAGCATGTGTTCCAGCACGCCGTGCCCCAGGAGGGCAAGCC
 AATCACCACCAAGAGAGCTCAGGGCGATGCTGGATCTTTTCTTGTCTGAATGTT
 ATGAGGCTTCCATTCATGAAAAAGTTAAATATTGAAGAATTTGAGTTTAGCCAAT
 CTTACCTGTTTTTTTGGGACAAGGTTGAACGCTGTTATTTCTTCTTGAGTGCTTTT
 GTGGACACAGCCCAGAGAAAGGAGCCTGAGGATGGGAGGCTGGTGCAGTTTTTG

CTTATGAACCCTGCAAATGATGGTGGCCAATGGGATATGCTTGTTAATATTGTTG
 AAAAATATGGTGTATCCCTAAGAAATGCTTCCCTGAATCTTATACAACAGAGGC
 AACCAGAAGGATGAATGATATTCTGAATCACAAGATGAGAGAATTCTGTATACG
 ACTGCGGAACCTGGTACACAGTGGAGCAACGAAAGGAGAAATCTCGGCCACACA
 5 GGACGTCATGATGGAGGAGATATTCCGAGTGGTGTGCATCTGTTTGGGTAATCCA
 CCAGAGACATTACCTGGGAATATCGAGACAAAGATAAAAATTATCAGAAAATT
 GGCCCCATAACACCCTTGGAGTTTTACAGGGAACATGTCAAGCCACTCTTCAATA
 TGGAAGATAAGATTTGTTTAGTGAATGACCCTAGGCCCCAGCACAAGTACAACA
 AACTTTACACAGTGGAAATACTTAAGCAATATGGTTGGAGGGAGAAAACTCTAT
 10 ACAACAACCAGCCCATTGACTTCTGAAAAAGATGGTTGCTGCCTCCATCAAAGA
 TGGAGAGGCTGTGTGGTTTGGCTGTGATGTTGGAAAACACTTCAATAGCAAGCTG
 GGCCTCAGTGACATGAATCTCTATGACCATGAGTTAGTGTTTGGTGTCTCCTTGA
 AGAACATGAATAAAGCGGAGAGGCTGACTTTTGGTGAGTCACTTATGACCCACG
 CCATGACCTTCACTGCTGTCTCAGAGAAGGATGATCAGGATGGTGCTTTCACAAA
 15 ATGGAGAGTGGAGAATTCATGGGGTGAAGACCATGGCCACAAAGGTTACCTGTG
 CATGACAGATGAGTGGTTCTCTGAGTATGTCTACGAAGTGGTGGTGGACAGGAA
 GCATGTCCCTGAAGAGGTGCTAGCTGTGTTAGAGCAGGAACCCATTATCCTGCCA
 GCATGGGACCCCATGGGAGCTTTGGCTGAGTGATACTGCCCTCCAGCTCTTTCCT
 CCTTCCATGGAACCTGACGTAGCTGCAAAGGACAGATCCAGGGACTGAAGCCAA
 20 AGTTATGCAAGGGACTGTGTGTTGCCACAGGACACAGTCAGATTTCCAGTCTCCA
 CCAGGAACCTCTTCAGAAAGTGTGCTTTATGCTGAAACAGAATACTGTTAAAGGA
 AAAAAAAGAGGGGGGAAGATCAGGTCATACTATCTACTCTCCTCATCTCTAACA
 GCTCAGGATCTCTTAGCATTTAATTAGATGTAATTGTTTGTCTTTAACTGTCAAA
 AAGTTTGGTTCTGTGTCTGTGTTTTAATAAGACGAGAGGACGAGCGATTGAGGTG
 25 TATGGAGAGAAAACAGACCTAATGCTCCTTGTTCCCTAGAGTAGAGTGGAGGGAG
 GGTGGCCTAAGAGTTGAGCTCTCGGAACCTGCATGCTGCTGGACAGTATCACTGTC
 TTTCCCTAGATGGCAGTCACTGAATTCCATTTTTTCAAGGTAATTTCTTGTGCCTCT
 AATAGCCCAAGAATGGGAGGTTGATCAGATCTGACATGATTCCTTCCTGTTCTGA
 ACTGTGGGGTGTGCACATCTCTGCTTGAGTCAGGTTTGAGTAGAGGCTTAGAGAC
 30 AGTTGGGTGAGAACAAACCAAAATCTTATCATGGTCTCAGTCATAATCATTAGGGG
 GAACTCTAGCCAAATGGTTTAACTTCTGCCTGTGGAACCTGGGGATTGGGTGGGCA
 GGAAAAGGTGATATCCATTCTTTCTGATAACTAGATGGTGCTGAGAAGCTTTTGA
 ATAAAACTTTGCTAAATGAGAATAAGCTG

35 SEQ ID NO: 411

>5836 BLOOD 343991.1 J02960 g178203 Human beta-2-adrenergic receptor gene, complete cds. 0

CTTTTGCTTTCTATAGCTTCAAATGTTCTTAATGTTAAGACATTCTTAATACTCT
 GAACCATATGAATTTGCCATTTTGGTAAGTCACAGACGCCAGATGGTGGCAATTT
 40 CACATGGCACAACCCGAAAGATTAACAAACTATCCAGCAGATGAAAGGATTTT
 TTTAGTTTCATTGGGTTTACTGAAGAAATTGTTTGAATTCTCATTGCATCTCCAGT
 TCAACAGATAATGAGTGAGTGATGCCACACTCTCAAGAGTTAAAAACAAAACAA
 CAAAAAATTAACAAAAGCACACAACCTTCTCTCTGTCCCAAAATACATAC
 TTGCATACCCCCGCTCCAGATAAAATCCAAAGGGTAAACTGTCTTCATGCCTGC
 45 AAATTCCTAAGGAGGGCACCTAAAGTACTTGACAGCGAGTGTGCTGAGGAAATC
 GGCAGCTGTTGAAGTCACCTCCTGTGCTCTTGCCAAATGTTTGAAAGGGAATACA
 CTGGGTACCGGGTGTATGTTGGGAGGGGAGCATTATCAGTGCTCGGGTGAGGC
 AAGTTCGGAGTACCCAGATGGAGACATCCGTGTCTGTGTCGCTCTGGATGCCTCC
 AAGCCAGCGTGTGTTTACTTTCTGTGTGTGTCACCATGTCTTTGTGCTTCTGGGTG

CTTCTGTGTTTGTCTTCTGGCCGCGTTTCTGTGTTGGACAGGGGTGACTTTGTGCCG
GATGGCTTCTGTGTGAGAGCGCGCGAGTGTGCATGTCGGTGAGCTGGGAGGG
TGTGTCTCAGTGTCTATGGCTGTGGTTCGGTATAAGTCTGAGCATGTCTGCCAGG
GTGTATTTGTGCCTGTATGTGCGTGCCTCGGTGGGCACTCTCGTTTCCTTCCGAAT
5 GTGGGGCAGTGCCGGTGTGCTGCCCTCTGCCTTGAGACCTCAAGCCGCGCAGGCG
CCCAGGGCAGGCAGGTAGCGGCCACAGAAGAGCCAAAAGCTCCCGGGTTGGCTG
GTAAGGACACCACCTCCAGCTTTAGCCCTCTGGGGCCAGCCAGGGTAGCCGGGA
AGCAGTGGTGGCCCGCCCTCCAGGGAGCAGTTGGGGCCCCGCCCCGGGCCAGCCCC
AGGAGAAGGAGGGCGAGGGGAGGGGAGGGAAAGGGGAGGAGTGCCTCGCCCCCT
10 TCGCGGCTGCCGGCGTGCCATTGGCCGAAAGTTCCCGTACGTACGGCGAGGGC
AGTTCCCTAAAGTCCTGTGCACATAACGGGCAGAACGCACTGCGAAGCGGCTT
CTTCAGAGCACGGGGCTGGAAGTGGCAGGCACCGCGAGCCCCCTAGCACCCGACA
AGCTGAGTGTGCAGGACGAGTCCCCACCACACCCACACCCACAGCCGCTGAATGA
GGCTTCCAGGCGTCCGCTCGCGGCCCGCAGAGCCCCGCGGTGGGGTCCGCCTGCT
15 GAGGCGCCCCCAGCCAGTGCCTTACCTGCCAGACTGCGCGCCATGGGGCAACC
CGGGAACGGCAGCGCCTTCTTGCTGGCACCCAATAGAAGCCATGCGCCGGACCA
CGACGTCACGCAGCAAAGGGACGAGGTGTGGGTGGTGGGCATGGGCATCGTCAT
GTCTCTCATCGTCTGGCCATCGTGTGTTGGCAATGTGCTGGTCATCACAGCCATTG
CCAAGTTCGAGCGTCTGCAGACGGTCACCAACTACTTCATCACTTCACTGGCCTG
20 TGCTGATCTGGTCATGGGCCTGGCAGTGGTGCCCTTTGGGGCCGCCCATATTCTT
ATGAAAATGTGGACTTTTGGCAACTTCTGGTGCAGATTTTGGACTTCCATTGATG
TGCTGTGCGTCACGGCCAGCATTGAGACCCCTGTGCGTGATCGCAGTGGATCGCTA
CTTTGCCATTACTTCACCTTTCAGTACCAGAGCCCTGCTGACCAAGAATAAGGCC
CGGGTGATCATTCTGATGGTGTGGATTGTGTCAGGCCCTTACCTCCTTCTTGCCCAT
25 TCAGATGCACTGGTACCGGGCCACCCACCAGGAAGCCATCAACTGCTATGCCAA
TGAGACCTGCTGTGACTTCTTCACGAACCAAGCCTATGCCATTGCCTCTTCCATCG
TGTCTTCTACGTTCCCCTGGTGATCATGGTCTTCGTCTACTCCAGGGTCTTTCAG
GAGGCCAAAAGGCAGCTCCAGAAGATTGACAAATCTGAGGGCCGCTTCCATGTC
CAGAACCTTAGCCAGGTGGAGCAGGATGGGCGGACGGGGCATGGACTCCGCAGA
30 TCTTCCAAGTTCTGCTTGAAGGAGCACAAAGCCCTCAAGACGTTAGGCATCATCA
TGGGCACTTTTACCCTCTGCTGGCTGCCCTTCTTCATCGTTAACATTGTGCATGTG
ATCCAGGATAACCTCATCCGTAAGGAAGTTTACATCCTCCTAAATTGGATAGGCT
ATGTCAATTCTGGTTTCAATCCCCTTATCTACTGCCGGAGCCCAGATTTCAAGGATT
GCCTTCCAGGAGCTTCTGTGCCTGCGCAGGTCTTCTTTGAAGGCCTATGGGAATG
35 GCTACTCCAGCAACGGCAACACAGGGGAGCAGAGTGGATATCACGTGGAACAGG
AGAAAGAAAATAAACTGCTGTGTGAAGACCTCCCAGGCACGGAAGACTTTGTGG
GCCATCAAGGTACTGTGCCTAGCGATAACATTGATTCACAAGGGAGGAATTGTA
GTACAAATGACTCACTGCTGTAAAGCAGTTTTTCTACTTTTAAAGACCCCCCCCC
GCCCAACAGAACACTAAACAGACTATTTAACTTGAGGGTAATAAACTTAGAATA
40 AAATTGTAAAATTGTATAGAGATATGCAGAAGGAAGGGCATCCTTCTGCCTTTTT
TATTTTTTTAAGCTGTAAAAAGAGAGAAAACCTTATTTGAGTGATTATTTGTTATTT
GTACAGTTCAGTTCCTCTTTGCATGGAATTTGTAAAGTTTATGTCTAAAGAGCTTTA
GTCCTAGAGGACCTGAGTCTGCTATATTTTCATGACTTTTCCATGTATCTACCTCA
CTATTCAAGTATTAGGGGTAATATATTGCTGCTGGTAATTTGTATCTGAAGGAGA
45 TTTTCTTCTACACCCTTGGACTTGAGGATTTTGAAGTATCTCGGACCTTTCAGCT
GTGAACATGGACTCTTCCCCCACTCCTCTTATTTGCTCACACGGGGTATTTTAGGC
AGGGATTTGAGGAGCAGCTTCAGTTGTTTTCCCGAGCAAAGTCTAAAGTTTACAG
TAAATAAATTGTTTGACCATGCCTTCATTGCACCTGTTTCTCCAAAACCCCTTGAC
TGGAGTGCTGTTGCCTCCCCCACTGGAAACCGCAGGTAACCTACTTGTAATTACTG

CCCATGACTTAATGTAGAATGATACAAGAATGACATGCACAGATTGCTTAACCCCT
TTCATTTGCCTTTGAGTCTGCTGCTGCAAAGCTGCATCTCTCCTGACACTTGTGCC
CCAAATCAGTTCTGCCTGCTCTTAGTATAGCTCAACTCTCCCTATGGTTATTGTTT
TGTGTTGTTACCTCAGAAACACTGACTCACAGAAGCGGAGTTAAGGGGATATGTT
5 TTTTCTCTCCACGTGCACCCACCACCCACCTTCCAGTTCTACTTGTTTCAAACCT
GTTTATATTTCTGTCTTGGCCATGTGTTTACAG

SEQ ID NO: 412

>5885 BLOOD 345860.21 X16832 g29709 Human mRNA for cathepsin H (EC 3.4.22.16). 0

10 CGCTCCCGCCGCTCCTCCACGCTCGTGCCGCCCCCCCCGCGCTCCCAGTTGACGC
TCTGGGCCGCCACCTCCGCGGACCCTGCAGCGCAAGAGCCAAGCCGCCAGCGCT
GGCTATGTGGGCCACGCTGCCGCTGCTCTGCGCCGGGGCCTGGCTCCTGGGAGTC
CCCGTCTGCGGTGCCGCCGAACCTGTCCGTGAACTCCTTAGAGAAAGTTTCACTTCA
AGTCATGGATGTCTAAGCACCGTAAGACCTACAGTACGGAGGAGTACCACCACA
15 GGCTGCAGACGTTTGCCAGCAACTGGAGGAAGATAAACGCCCCACAACAATGGGA
ACCACACATTTAAAATGGCACTGAACCAATTTTCAGACATGAGCTTTGCTGAAAT
AAAACACAAGTATCTCTGGTCAGAGCCTCAGAATTGCTCAGCCACCAAAAAGTAA
CTACCTTCGAGGTACTGGTCCCTACCCACCTTCCGTGGACTGGCGGAAAAAAGGA
AATTTTGTCTCACCTGTGAAAAATCAGGGTGCCTGCGGCAGTTGCTGGACTTTCT
20 CCACCACTGGGGCCCTGGAGTCTGCGATCGCCATCGCAACCGGAAAGATGCTGT
CCTTGGCGGAACAGCAGCTGGTGGACTGCGCCCAGGACTTCAATAATCACGGCT
GCOAAGGGGGTCTCCCCAGCCAGGCTTTCGAGTATATCCTGTACAACAAGGGGA
TCATGGGTGAAGACACCTACCCCTACCAGGGCAAGGATGGTTATTGCAAGTTCCA
ACCTGGAAAGGCCATCGGCTTTGTCAAGGATGTAGCCAACATCACAATCTATGAC
25 GAGGAAGCGATGGTGGAGGCTGTGGCCCTCTACAACCCTGTGAGCTTTGCCTTTG
AGGTGACTCAGGACTTCATGATGTATAGAACGGGCATCTACTCCAGTACTTCCTG
CCATAAACTCCAGATAAAGTAAACCATGCAGTACTGGCTGTTGGGTATGGAGA
AAAAAATGGGATCCCTTACTGGATCGTGAAAAACTCTTGGGGTCCCCAGTGGGG
AATGAACGGGTACTTCCTCATCGAGCGCGGAAAGAACATGTGTGGCCTGGCTGC
30 CTGCGCCTCCTACCCCATCCCTCTGGTGTGAGCCGTGGCAGCCGCAGCGCAGACT
GGCGGAGAAGGAGAGGAACGGGCAGCCTGGGCCTGGGTGGAAATCCTGCCCTG
GAGGAAGTTGTGGGGAGATCCACTGGGACCCCCAACATTCTGCCCTCACCTCTGT
GCCAGCCTGGAAACCTACAGACAAGGAGGAGTTCCACCATGAGCTCACCCTGTG
TCTATGACGCAAAGATCACCAGCCATGTGCCTTAGTGTCTTCTTAACAGACTCA
35 AACCACATGGACCACGAATATTCTTTCTGTCCAGAAGGGCTACTTTCCACATATA
GAGCTCCAGGGACTGTCTTTTCTGTATTCTGCTGTTCAATAAACATTGAGTGAGCA
CCTCCCCAGATGGAGCATGCTGGTCCTGGAA

SEQ ID NO: 413

40 >5900 BLOOD 982889.1 Y00290 g36610 Human mRNA for steroid hormone receptor
hERR2. 0

CTCCTCCAAGTGGGAATGCTAAAACGGGACTGATGGACGTGTCCGAAGTCTGCAT
CCCGGACCCCTCGGCTACCACAACCAGTAGGTTGCTGAACCGAATGTCGTCCGA
AGACAGGCACCTGGGCTCTAGCTGCGGCTCCTTCATCAAGACGGAGCCATCTAGC
45 CCATCCTCGGGCATTGATGCCCTCAGCCACCACAGCCCCAGCGGCTCGTCCGACG
CCAGCGGTGGCTTTGGCATGGCCCTGGGCACCCACGCCAACGGTCTGGACTCTCC
GCCTATGTTTCGAGGTGCGGGGCTGGGAGGCAACCCGTGTCGCAAGAGCTACGA
GGACTGTACTAGCGGTATCATGGAGGACTCGGCCATCAAGTGCAGTACATGCTT
AACGCCATCCCCAAGCGCCTGTGCCTCGTGTGCGGGGACATTGCTTCTGGCTACC

ACTATGGAGTGGCCTCCTGCGAGGCTTGCAAGGCGTTCTTCAAGAGAACCATTCA
AGGAAACATCGAATACAGCTGCCCTGCCACCAACGAGTGTGAGATCACCAAACG
GAGGCGCAAGTCCTGTCAGGCCTGCCGGTTCATGAAATGCCTCAAAGTGGGGAT
GCTGAAGGAAGGCGTGCGCCTTGACCGGGTGCGAGGAGGCCGCCAGAAGTACAA
5 GAGACGGCTGGATTTCGAGAACAGCCCCTACCTGAGCTTACAGATTTCCCCGCCT
GCTAAAAAGCCATTGACTAAGATTGTCTCGTATCTACTGGTGGCCGAGCCGGACA
AGCTGTACGCTATGCCTCCCGACGATGTGCCTGAAGGGGATATCAAGGCCCTGAC
CACTCTCTGTGACTTGGCAGATCGGGAGCTTGTGTTCCCTCATTAGCTGGGCCAAG
CACATCCCAGGTTTCTCCAACCTGACACTCGGGGACCAGATGAGCCTGCTGCAGA
10 GTGCCTGGATGGAGATCCTCATCCTGGGCATCGTGTACCGCTCGCTTCCCTATGA
TGACAAGCTGGCATAACGCGGAGGACTATATCATGGATGAGGAACACTCTCGCCT
GGTGGGGCTGCTGGAGCTTTACCGAGCCATCTTGCAGCTCGTACGCAGGTACAAG
AAGCTCAAGGTGGAGAAGGAAGAGTTTGTGATGCTCAAAGCCCTGGCCCTTGCC
AACTCAGATTCAATGTACATCGAGAACCTGGAGGCTGTGCAGAAGCTTCAGGAC
15 CTGCTGCATGAGGCGCTGCAGGACTATGAGCTGAGCCAGCGCCATGAGGAGCCA
CGGAGGGCGGGCAAGCTGCTGTTGACACTGCCCTGCTGCGGCAGACGGCAGCC
AAAGCCGTCCAGCACTTCTACAGTGTGAACTGCAGGGCAAGGTGCCCATGCAC
AAACTCTTCTGGAGATGCTGGAGGCCAAGGTGTGATGGCCCCGCATGCAGACG
GATGGACACGATCCACATGGAGACTTCCACGGCCACCAGCCTCGACTTTCTCACA
20 CCTGCATCGGGGCTCTGAGCTGTCCAGAAGAAGGGGTTTCTTGCTTCCCTGGCCA
TGTGCAGACTCCTGGGGGGCAGCAGATGGGGAGATGGGGATGGGAGGGTGGGG
GGGGGGGGCTCATCTGTCAACCCGAATTTCTTTGGTATTTTTTTTTTCTTCTCCA
TGGGCAGTGCTAAGGCTTGGGCGGGGGCTGACTTCCCTTAGGGCTGGAGACCAC
GGGAGGAAGCATCCCTTCTCTGCAAGGGATCCATTTCTGGACCACTCCATATTTAG
25 GACCTGGAGGTACCTGGATGGGCAGGGCTTAGTGCCCAGGGCCCAAGAGACTTA
GATTGGGTGCTCCTGAAGGTGTTGGTATCACAGAGGGCAGGCCCTTGGAACAGG
AGGTCTCTGTGGCCTCTCCTGGGGCTCTGTGCCTCCTCAGTCTAGCTGTCTCCCTC
CCCTTCCCCCTTTCTTGTCTAGTACATCCAGCTCTCAGTGGATGCTCCTGCTAGA
GTAGCCACATCCCCACCACTAAGAGGGCCCCTCCCCTGCTTCCCTGCCCTACCTCA
30 GCCAGCTGAGGTAACCTCCAGGACATGCACCTGGGAACCTCGCTGGCTCAGAAAAG
AGTTGGGTCTATACCCACCCTTGCCTGTTGTTTCTCCTAATCCTCTTGGGCATGG
CGAGTCTAGAAACCTATGGA

SEQ ID NO: 414

35 >5918 BLOOD 403530.1 M67439 g181830 Human D5 dopamine receptor (DRD5) gene,
complete cds. 0
CCCGGCGCAGCTCATGGTGAGCGCCTCTGGGGCTCGAGGGTCCCTTGGCTGAGG
GGGCGCATCCTCGGGGTGCCCGATGGGGCTGCCTGGGGGTGCGAGGGCTGAAGT
TGGGATCGCGCACAACCGACCCTGCAGTCCAGCCCCGAAATGCTGCCGCCAGGC
40 AGCAACGGCACCGCGTACCCGGGGCAGTTCGCTCTATACCAGCAGCTGGCGCAG
GGGAACGCCGTGGGGGGCTCGGCGGGGGCACCGCCACTGGGGCCCTCACAGGTG
GTCACCGCCTGCCTGCTGACCCTACTCATCATCTGGACCCTGCTGGGCAACGTGC
TGGTGTGCGCAGCCATCGTGCGGAGCCGCCACCTGCGCGCCAACATGACCAACG
TCTTCATCGTGTCTCTGGCCGTGTCTGACCTTTTCGTGGCGCTGCTGGTCATGCCC
45 TGGAAGGCAGTCGCCGAGGTGGCCGGTTACTGGCCCTTTGGAGCGTTCTGCGACG
TCTGGGTGGCCTTCGACATCATGTGCTCCACTGCCTCCATCCTGAACCTGTGCGTC
ATCAGCGTGGACCGCTACTGGGCCATCTCCAGGCCCTTCCGCTACAAGCGCAAGA
TGA CT CAGCGCATGGCCTTGGTCATGGTTCGGCCTGGCATGGACCTTGTCCATCCT
CATCTCCTTCATTCCGGTCCAGCTCAACTGGCACAGGGACCAGGCGGCCTCTTGG

GGCGGGCTGGACCTGCCAAACAACCTGGCCAACTGGACGCCCTGGGAGGAGGAC
 TTTTGGGAGCCCGACGTGAATGCAGAGAACTGTGACTCCAGCCTGAATCGAACCT
 ACGCCATCTCTTCTCGCTCATCAGCTTCTACATCCCCGTTGCCATCATGATCGTG
 ACCTACACGCGCATCTACCGCATCGCCCAGGTGCAGATCCGCAGGATTTCCTCCC
 5 TGGAGAGGGCCGCGAGAGCACGCGCAGAGCTGCCGGAGCAGCGCAGCCTGCGCG
 CCCGACACCAGCCTGCGCGCTTCCATCAAGAAGGAGACCAAGGTTCTCAAGACC
 CTGTCGGTGATCATGGGGGTCTTCGTGTGTTGCTGGCTGCCCTTCTTCATCCTTAA
 CTGCATGGTCCCTTTCTGCAGTGGACACCCCGAAGGCCCTCCGGCCGGCTTCCCC
 TGGCTCAGTGAGACCACCTTCGACGTCTTCGTCTGGTTCGGCTGGGCTAACTCCT
 10 CACTCAACCCCGTCATCTATGCCTTCAACGCCGACTTTCAGAAGGTGTTTGCCCA
 GCTGCTGGGGTGCAGCCACTTCTGCTCCCGCACGCCGGTGGAGACGGTGAACATC
 AGCAATGAGCTCATCTCCTACAACCAAGACATCGTCTTCCACAAGGAAATCGCA
 GCTGCCTACATCCACATGATGCCCAACGCCGTTACCCCGGCAACCGGGAGGTG
 GACAACGACGAGGAGGAGGGTCTTTTCGATCGCATGTTCCAGATCTATCAGACG
 15 TCCCCAGATGGTGACCCTGTTGCTGAGTCTGTCTGGGAGCTGGACTGCGAGGGGG
 AGATTTCTTTAGACAAAATAACACCTTTCACCCCGAATGGATTCCATTAACTGC
 ATTAAGAAACCCCTCATGGATCTGCATAACCGCACAGACACTGACAAGCACGC
 ACACACACGCAAATACATGGCTTTCCAGTGCTGCTCCCTTTATCATGTGTTTCTGT
 GTAGTAGCTCGTGTGCTTAGAAACCTCACCCATTGATTGATAGTTTGAAGAATT
 20 GGCAGAAGCAGTTGCAATAAACTCAGTCAAATGTACCCAGCCTACCAGAGATGG
 ACCAACGATCCTATGAGAGAAGAGAGTATGGTGCTGGGTCTTAAAAAAAAAAAA
 TGATACTTGGTCCTTAAAAAATATGCTCTCCCTCCCTTTTTTAAACAAATGGCTTG
 TTCAGTCACTTGTGTTGTGTTGAATTGATTTTTAAACAGCAGGTTGTGTGTGTG
 CAGTGATGTGGTGGGAGCAGAGCTTTCCTGGGTCTGGATTCCCGTGGCTTTGTGC
 25 TTATGTCATTTCTTCTCTGTGCTGGTGGGGGCCTCTTTACCATAGCTTAAGAAG
 TATCCCTG

SEQ ID NO: 415

>5932 BLOOD gi|3928192|emb|X62421.1|HSDNAJ Homo sapiens mRNA for DnaJ protein
 30 homologue
 GGGGCCGGGGGACGGCGACACGGGGTTCGGCGGGCCGCGAGGAGGGGGTTCATGGG
 TAAAGATTACTACCAGACGTTGGGCCAGGCCGCGGCGCTCGGACGAGGAGATCA
 AGCGGGCCTACCGCCGCCAGGCCTGCGCTACACCCGGACAAGAACAAGGAGCC
 CGGCGCCGAGGAGAAGTTCAAGGAGATCGCTGAGGCCTACGACGTGCTCAGCGA
 35 CCCGCGCAAGCGCGAGATCTTCGACCGCTACTTGGAGGAAGGCCTAAAGGGGAG
 TGGCCCCAGTGGCGGTACGGCGGAGGAGCCAATGGTACCTCTTTCAGCTACACAT
 TCCATGGAGACCCTCATGCCATGTTTGCTGAGTTCTTCGGTGGCAGAAATCCCTTT
 GACACCTTTTTTGGGCAGCGGAACGGGGAGGAAGGCATGGACATTGATGACCCA
 TTCTCTGGCTTCCCTATGGGGCATGGGTGGCTTACCAACGTGAACTTTGGCCGC
 40 TCTTGCTCTGCCAAGAGCCCGCCGAAAGAAGCAAGATCCCCCAGTCACGCAC
 GACCTTCGAGTCTCCCTTGAAGAGATCTACAGCGGCTGTACCAAGAAGACGAAA
 ATCTCCACAAGCGGCTAAACCCCGACGGAAAGAGCATTTCGAAACGAAGACAAA
 ATATTGACCATCGAAGTGAAGAAGGGGTGGAAAGAAGGAACCAAAATCACTTTC
 CCAAGGAAGGAGACCAGACCTCCAACAACATTCCAGCTGATATCGTCTTTGTTT
 45 TAAAGGACAAGCCCCACAATATCTTTAAGAGAGATGGCTCTGATGTCATTTATCC
 TGCCAGGATCAGCCTCCGGGAGGCTCTGTGTGGCTGCACAGTGAACGTCCCCACT
 CTGGACGGCAGGACGATACCCGTCGTATTCAAAGATGTTATCAGGCCTGGCATGC
 GGCGAAAAGTTCTTGAGAAGGCCTCCCCCTCCCCAAAACACCCGAGAAACGTG
 GGGACCTCATTATTGAGTTTGAAGCGATCTTCCCCGAAAGGATTCCCCAGACATC

AAGAACCGTACTTGAGCAGGTTCTTCCAATATAGCTATCTGAGCTCCCCAAGGAC
 TGACCAGGGACCTTTCCAGAGCTCAAGGATTTCTGGACCTTTCTACCAGTTGTGG
 ACCATGAGAGGGTGGGAGGGCCCCAGGGAGGGCTTTCGTACTGCTGAATGTTTTTC
 CAGAGCATATATTACAATCTTTCAAAGTCGCACACTAGACTTCAGTGGTTTTTCG
 5 AGCTATAGGGCATCAGGTGGTGGGAACAGCAGGAAAAGGCATTCCAGTCTGCCC
 CACTGGGTCTGGCAGCCCTCCCGGGATGGGCCCACATCCACCTCCAGTCCCTGGC
 CAGGGGTGAGAGGCAGACCAGCAGATGGACTTGATCCCTCTGTGTCTTTTTGCTT
 CTGGCTGGTAGATAATGTCAACCTGCAGTCTTGATTCCCAGACCCTGTACACTCC
 TCCTTTTCTGCCGCGCGATCAGTTTGTGCTTTATTCTGTATTTGTCTCCCATGTCTT
 10 GCTCTTCTCCTGGA

SEQ ID NO: 416

>5934 BLOOD 197542.1 S37375 g32468 Human HSJ1 mRNA. 0

CCCGCCTGACGACTGACCAGTTGCCATGGCATCCTACTACGAGATCCTAGACGTG
 15 CCGCGAAGTGCGTCCGCTGATGACATCAAGAAGGCGTATCGGCGCAAGGCTCTC
 CAGTGGCACCCAGACAAAAACCCAGATAATAAAGAGTTTGCTGAGAAGAAATTT
 AAGGAGGTGGCCGAGGCATATGAAGTGCTGTCTGACAAGCACAAGCGGGAGATT
 TACGACCGCTATGGCCGGGAAGGGCTGACAGGGACAGGAACTGGCCCATCTCGG
 GCAGAAAGCTGGCAGTGGTGGGCCTGGCTTCACCTTCACCTTCCGCAGCCCCGAGG
 20 AGGTCTTCCGGGAATTCTTTGGGAGTGGAGACCCTTTTGCAGAGCTCTTGATGA
 CCTGGGCCCCCTTCTCAGAGCTTCAGAACCGGGGTTCGCGACACTCAGGCCCTTC
 TTTACCTTCTCTTCCTCCTTCCCTGGGCACTCCGATTTCTCCTCCTCATCTTTCTCC
 TCTOAGTCTCTGGGGCTGGTGTCTTTTCGCTCTGTCTTCTACATCTACCACCTTTGTCCA
 25 AAGGAGCGCCGCATCACACACGCAAGAATCATGGAGAACGGGCAGGAGCGGGTGG
 AAGTGGAGGAGGATGGGCAGCTGAAGTCAGTCACAATCAATGGTGTCCCAGATG
 ACCTGGCACGTGGCTTGAGCTGAGCCGTCGCGAGCAGCAGCCGTCAGTCACTTC
 CAGGTCTGGGGGCACTCAGGTCCAGCAGACCCCTGCCTCATGCCCCCTTGGACAGC
 GACCTCTCTGAGGATGAGGACCTGCAGCTGGCCATGGCCTACAGCCTGTCTAGAG
 ATGGAGGCAGCTGGGAAGAAACCCGCAGGTGGGCGGGAGGCACAGCACCGACG
 30 GCAGGGGCGCCCAAGGCCAGCACCAAGATCCAGGCTTGGGGGGGACCCAGGA
 GGGTGCAGAGGGGTGAAGCAACCAAACGCAGTCCATCCCCAGAGGAGAAGGCCTC
 TCGCTGCCTCATCCTCTGAACACCGGGGCCCAACCTGATCTGATCCAGATCTTGAC
 TGGGGGGTCTGACTCACTGTGGGAAGAGAAGAGGGGAGTATCCTGAGTTGTAGG
 AACTGCTTTCCAACCTCCAAGCTCCCTCCACAAGTTTCCCTCCCCAGGCCCCCCAC
 35 ACCCCAGTGTGGACTTGGGATTTGCTGTGCTCAGCCCAGGGCTGATAGGTCCCTG
 GTGAAGCCCAGGGTGGGGGGTGTGAGGGCAGTGGAGGGGGCCGAGGAGCCAGG
 TTGCATTTATTGGATGGGGAGCTCCAAGGGGCATTAGTGGTTTGGGCTGGGCTTT
 TGTGCCCTGGTACTCTGCCACCTGTGTTGCTGATGGTGTCAAGGAAGGAGGACTT
 GGCCTAGGGTTGTCTGAGCCGGAGCCGGCAGTCCACTGGAGAGCAGTGCAGGC
 40 AGAGTGGAGCCTCCTGCTCTCCTGGACCAGCTGCAGACCCCCAACCTGGTTTCT
 GTGCCATGTTGCGCTCTGACCGTCTCTGTTGCTTCTCTTCTGGTGTGTGCTTCTCCTC
 CCTCCCATTCTCTCTGCAACTCCTGCGGGCGCATCGCTTGCTTTCCTGCGGTCTG
 GCTAGGACTCCCTTCTTCCCTTCCCTTCCCCGAGAAGGCCTCAATGTGGCGAGGAAG
 ATGCTGGGGCCGGTAGGGCTGTGAGATCTTCTGGGGAGGCTAGCCGGGTGGGGC
 45 GGGAGCCTCTCAGCTGTCCAGATTCAGAACTGGAGCCCACTCCTCCTCCCTCTCG
 TTGCCTCAGCCCTGCCCTCACCTCAGACTAGGCAGAGGTGAGGCTGGCTCACCC
 TGAAGAGGTGGGATAGGAGGGGACTGCACCCATACTGCTTCCCTACCACAAATC
 AGGGCTCAGGGAGAGGCCATGCGGCAGCCAGGTCTGCATGCTGAGCCCCATCC
 TCCACAGCTTGCCGCTGACGCTCTCTCCTGTACCCCGCCCCTGCTCTCTCCCCAG

ATGTGTTCTGAGCTGGATGCCGGGTTCAGAAATCGCTGCACAGTTCCAACAGGAC
AGCGCCTTCCCCCATGCGCTGGGAGGGGACCCTCCATTTCTCCCCCTCACCCATG
CTGAGTGTAGAGCCGGGGCCTGGGTGGCGGGTGGGGGCCGGGTGGGAGGTGGCA
GTAGTCTTAGCCTGTGCACTCTCTTCCTTGGGTGTTTGGTGCTGGCTCCTGGGGAC
5 TACAAATCCCAGAGTGCGGTGTGCCCGGCCTCATTTCTGATAGATCCCGCTTGGG
GGAGGTGGTGTATGGTTACGGAGCTGTGCATCTTGGGACATGTAGTAGCCCAGGT
CTTGTCACCTCGCTGTGAGATGGGGAGATTTTGTCTTTTGATTTATCCCTGTAGGGC
TGGCAGGGTTGTAGATGAAGGGGGAATGATCTGAGCCTTGGTTCCCCTGACACGT
CTTGCTAGCCCCAGGGTTAGAGTGGGCAGGGCAGAGCCGCGCAGCACCTGGGAG
10 CGGTACCTTTCCCTTGGGCAGCCTGGGGTCCCAGGAACAAGCCAGGGCGAGTGG
CATGTCTGCCTGAGCAGGGTGTGGCCCCAGAAAGCTGAGGAGTGTGGGCTGGCA
GAGAGCTTCGAGGGCAAGGCCACCCGCGGGGGCGTGTGTGTGGTGGGGCTTGGC
ATGTGATGGCAGCTCCAGCTCCAGGCATGCCGCTGCTTGTATGGCTTTCTTTGGC
CTCTGACCCTGCTGCCCATTTCTTTCCAACATCACAGATGAACTGCCTCTCCTCCTC
15 CCTGCCTGGGGAGCCCAGTGGCCAGGGAGGGAGTGGTGGAGCCAGTCGCTGTAA
CACTGAGCCTCAGAGACGAACCAAAACCAGCTGGGCTGAGCTCAGATCCAGGGG
GAAGAAATGCTGGAAGTCAATAAACTGAGTTTGAG

SEQ ID NO: 417

20 >5950 BLOOD 337103.1 S54181 g35020 Human mRNA for neurotensin receptor. 0
TCAAGCTCGCCCCGCGCAGCCCGAGCCGGGCTGGGCGCTGTCCTCGGGGGCCTG
GGGAACCGCGCGGTTTGGAGATCGGAGGCACCTGGAACCCGTGGCAAGCGGCCGA
GCCGGGAGACAGCCCGAGGAACCAACGGGTTCTGGAGCTAGGAGCCGGAAGCTG
GGAGTCCGGAGGAGAGCGGAGCCCGGAGCCCGGGGGCGGCGCGTCTG
25 GGTCTGGCGCTTCCCGACTGGACGGCGCGCCCGCTGGTCTTCGCCACGCGCCCTC
CCCTGGGCTCGCGTTCATCGGTCCCCGCCTGAGACGCGCCCACTCCTGCCCGGAC
TTCCAGCCCCGGAGGCGCCGGACAGAGCCGCGGACTCCAGCGCCCAACATGCGC
CTCAACAGCTCCGCGCCGGGAACCCCGGGCACGCCGGCCGCGGACCCCTTCCAG
CGGGCGCAGGCCGGACTGGAGGAGGCGCTGCTGGCCCCGGGCTTCGGCAACGCT
30 TCGGGCAACGCGTCCGAGCGCGTCTGGCGGCACCCAGCAGCGAGCTGGACGTG
AACACCGACATCTACTCCAAAGTGCTGGTGACCGCCGTGTACCTGGCGCTCTTCG
TGGTGGGCACGGTGGGCAACACGGTGACGGCGTTACGCTGGCGCGGAAGAAGT
CGCTGCAGAGCCTGCAGAGCACGGTGCATTACCACCTGGGCAGCCTGGCGCTGT
CCGACCTGCTACCCCTGCTGCTGGCCATGCCCGTGGAGCTGTACAACTTCATCTG
35 GGTGCACCAACCCCTGGGCCTTCGGCGACGCCGGCTGCCGCGGCTACTACTTCCTG
CGCGACGCCTGCACCTACGCCACGGCCCTCAACGTGGCCAGCCTGAGTGTGGAG
CGCTACCTGGCCATCTGCCACCCCTTCAAGGCCAAGACCCTCATGTCCCGAAGCC
GCACCAAGAAGTTCATCAGCGCCATCTGGCTCGCCTCGGCCCTGCTGACGGTGCC
TATGCTGTTACCATGGGCGAGCAGAACCGCAGCGCCGACGGCCAGCACGCCGG
40 CGGCCTGGTGTGACCCCCACCATCCACACTGCCACCGTCAAGGTCGTACATACAG
GTCAACACCTTCATGTCCTTCATATTCCCCATGGTGGTCATCTCGGTCTGAACAC
CATCATCGCCAACAAGCTGACCGTCATGGTACGCCAGGCGGCCGAGCAGGGCCA
AGTGTGCACGGTCCGGGGGCGAGCACAGCACATTACGATGGCCATCGAGCCTGG
CAGGGTCCAGGCCCTGCGGCACGGCGTGCAGCTCCTACGTGCAGTGGTTCATCGCC
45 TTTGTGGTCTGCTGGCTGCCCTACCACGTGCGGCGCCTCATGTTCTGCTACATCTC
GGATGAGCAGTGGACTCCGTTCTCTATGACTTCTACCACTACTTCTACATGGTG
ACCAACGCACTCTTCTACGTGAGCTCCACCATCAACCCCATCCTGTACAACCTCG
TCTCTGCCAACTTCCGCCACATCTTCTGGCCACACTGGCCTGCCTCTGCCCGGTG
TGGCGGCGCAGGAGGAAGAGGCCAGCCTTCTCGAGGAAGGCCGACAGCGTGTCC

AGCAACCACACCCTCTCCAGCAATGCCACCCGCGAGACGCTGTACTAGGCTGTGC
GCCCCGGAACGTGTCCAGGAGGAGCCTGGCCATGGGTCCTTGCCCCCGACAGAC
AGAGCAGCCCCCACC CGGAGCCTTGATGGGGGTCAGGCAGAGGCCAGCCTGCA
CTGGAGTCTGAGGCCTGGGACCCCCCTCCACCCCCTAACCCATGTTTCTCATT
5 AGTGTCTCCCGGGCCTGTCCCCAACTCCTCCCCACCCCTCCCCCATCTCCTCTTTG
AAAGCCAGAACAAAGAGAGCGCTCCTCTCCAGATAGGAAAAGGGCCTCTAACAA
GGAGAAATTAGTGTGCGGCAAAAGGCAGTTTTCTTTGTTCTCAGACTAATGGATG
GTTCCAGAGAAGGAAATGAAATGTGCTGGGTGGGGCCGGGCCTCCGGCGGCCCCG
GCTGCTGTTCCCATGTCCACATCTCTGAGGCCTGCACCCCCTCTGTCTAGCTCGGG
10 GAGTCCAGCCCCAGTCCCGCAGGCTCCGTGGCTTTGGGCCTCACGTGCAGACCCT
GCCATGCAGACCCATGCCCCCTCCCCCAGGCAGCTCCAAGAAAGCTCCCTGACT
CGCCCCCTTCAGGCCTGGCAAGCTGGGGGGCCATCGCCGTGGGGGAGTCCCTCCAC
CACCTCGCCGCAGGCAGCTGCAGCCCCCAGAGGGGACCACAAGCCCAAAAAGG
ACAAAAATGGGCTGGCCTGGAATGGCCAGACCCAGCCTCCCCTCCTCCCTCCC
15 ATCCTCACCCAGGCCAAGGCCAGGGGCTCTGCCAGGACACCACATGGGAGGGG
GCTCAGGCCTCAGCCTCAAGATCTTCAGCTGTGGCCTCTCGGGCTCGGCAGAAGG
GACGCCGGATCAGGGGCCTGGTCTCCAGCACCTGCCCGAGTGGCCGTGGCCAGG
ATGGGGTGCGCATTCCGTGTGCTTTGCTTGTAAGCTGTGCAGGCTGAGGTCTGGAG
CCAGGCCCAGAGCTGGCTTCAGGGTGGGGCCTTGAGAAGGGGAATGTGGGACAG
20 GGGCGATGGTGCCTGGTCTCTGAGTAAGATGCCAGGTCCCAGGAAGCTCAGGCTTC
AGGTGAGAAGGAGCGGTGTGTCCAGGCACCGCTGGCCGGCAGCCCTGGGCTGAG
GCACAGACTCATTGTGTCACCTCTGGCGGGCGGCAGCCTGGGCCCGGCCTGCAAG
EAGTTGAAAAAGCTGGGCGCTCCTTGGTCTGTAGGATCCAGGCTCCACAGAGGAG
ATGACTAGCCAGGCCCTGGCTTAAGAAGGTGCGCTAAGCCTAAGAGAAGACAG
25 TCCCAGGAGAAGCTGGCCGGGACCAGCCAGGAGCTGGGAGCCACAGGAAGCAA
AAGTCAGCCTTTTCTTCAAGGGATTTCCTGTCTCAGAGCAGCCTTTGCCCCAGG
GAAATGGGCTCTGGGCTGGCTGCCTGCACCGGCCATGTGACCCAGGACCCGGA
CACCTGGTCTTGGGCTGTGTTCAAGCCACTTTGCCTTCTCTGGACTCAGTTTCCCCG
TCTGAGAAATGAGAGTCGAATGCTACAGTATCTGCAGTCGCTTGGATCTGGCTGT
30 TGAGTTGACGGGTTCTTGAACCCCAACAAATCCCTCTCCAACCACAGGACCCTT
CGGCTCACCAAGAACGGGGCCAGGGGAGTCAGGCCTATTCGCTGCACTTCTTG
CCAAACTTTGCCCCCAACAGCCTGGTCATCAGCCAGGCAGCCCTTCCAGTGCCCA
AGGGCCACCAACCCAGGGAAACAGGGCCAGCACAGAGGGGCCTTCTCCCCCA
CAGAGCTCCCATGACATAGTCTGCTCTGGGCGGAAGAGCTTTGCTGCCAGCCAGG
35 GATGTCCAGAGGTTCGGTGCAGCCCCTATCCCTGCTCAGGAGTGGGCTCAGAGTCT
AGCAAATGCTAAGGCCCTCAGGCTGGGCTCTGAACGAGGACCTGGACTCAGAG
CCAGACAGGGCAGCCTCAGACCCTTCTCTGGGGCTCCTGGACCTTGGGCCATAAT
TTCTGAGCCTCGGTTTCCCCATCTAAGGAACAGATGTGGTTCGTTCCGCCCTCTCA
GCTGGATGAGACTGTCCTGGAGGATCCACCCCGGAACAGACAGAATGGTGTCTC
40 TCAGGATGGTGTCTCTGAGAGAGGGCAGAGTGGATGCCCCACTGCCCTAGACCCT
CGGTAGACGTGGGGTCTCTGGGGCGGGGTCTGTGGCTGTGACTGAAGTCGGCTTT
CCCGTTGATGTCTTGATGCTCCTATCTGTGCACTTACCGTAGGTAGGGACACGTG
TCCATGCACCACAGACACACCCACGACACCTGATCTCGTATCACTAGCTTGCGGC
CAGGTCATGATGTGGCCCCGGAAGCTGGCCCTGCGTGCCATGAGTGCCTCGGTCA
45 TGGAGTCCGGAGCCCCCTGAGCCGGCCCCCTGGTGACGGCACAGCCCTCACAGCTC
AAACGCCACCCCCACTCCACCATCTGCAGGTGGTGAAAACAAACCCCGTGTAT
CTCTCAATAAAGGTGGCCGAAGGGCCTCGATGTGG

SEQ ID NO: 418

>5956 BLOOD Hs.92208 gnl|UG|Hs#S376155 Human metargidin precursor mRNA,
complete cds /cds=(7,2451) /gb=U41767 /gi=1235673 /ug=Hs.92208 /len=2740

CGCTGCCATGCGGCTGGCGCTGCTCTGGGCCCTGGGGCTCCTGGGCGCGGGCAGC
5 CCTCTGCCTTCCTGGCCGCTCCCAAATATAGGTGGCACTGAGGAGCAGCAGGCAG
AGTCAGAGAAGGCCCCGAGGGAGCCCTTGGAGCCCCAGGTCCTTCAGGACGATC
TCCCAATTAGCCTCAAAAAGGTGCTTCAGACCAGTCTGCCTGAGCCCCTGAGGAT
CAAGTTGGAGCTGGACGGTGACAGTCATATCCTGGAGCTGCTACAGAATAGGGA
GTTGGTCCCAGGCCGCCCAACCCTGGTGTGGTACCAGCCCGATGGCACTCGGGTG
10 GTCAGTGAGGGACACACTTTGGGAGAACTGCTGCTACCAGGGAAGAGTGCGGGGA
TATGCAGGCTCCTGGGTGTCCATCTGCACCTGCTCTGGGCTCAGAGGCTTGGTGG
TCCTGACCCCAGAGAGAAGCTATACCCTGGAGCAGGGGCCTGGGGACCTTCAGG
GTCCTCCCATTAATTCGCGAATCCAAGATCTCCACCTGCCAGGCCACACCTGTGC
CCTGAGCTGGCGGGAATCTGTACACACTCAGACGCCACCAGAGCACCCCCTGGG
15 ACAGCGCCACATTCGCCGGAGGCGGGATGTGGTAACAGAGACCAAGACTGTGGA
GTTGGTGATTGTGGCTGATCACTCGGAGGCCAGAAATACCGGGACTTCAGCAC
CTGCTAAACCGCACACTGGAAGTGGCCCTCTTGCTGGACACATTCTTCCGGCCCC
TGAATGTACGAGTGGCACTAGTGGGCCTGGAGGCCTGGACCCAGCGTGACCTGG
TGGAGATCAGCCCAAACCCAGCTGTCACCCTCGAAAACCTCCTCCACTGGCGCAG
20 GGCACATTTGCTGCCTCGATTGCCCCATGACAGTGCCCAGCTGGTGACTGGTACT
TCATTCTCTGGGCCTACGGTGGGCATGGCCATTCAGAACTCCATCTGTTCTCCTGA
CTTCTCAGGAGGTGTGAACATGGACCACTCCACAGCATCCTGGGAGTCGCCTCC
TCCATAGCCCATGAGTTGGGCCACAGCCTGGGCCTGGACCATGATTTGCTGGGA
ATAGCTGCCCTGTCCAGGTCCAGCCCCAGCCAAGACCTGCATCATGGAGGCCTC
25 CACAGACTTCCTACCAGGCCTGAACCTCAGCAACTGCAGCCGACGGGCCCTGGA
GAAAGCCCTCCTGGATGGAATGGGCAGCTGCCTCTTCGAACGGCTGCCTAGCCTA
CCCCCTATGGCTGCTTTCTGCGGAAATATGTTTGTGGAGCCGGGCGAGCAGTGTG
ACTGTGGCTTCCTGGATGACTGCGTCGATCCCTGCTGTGATTCTTTGACCTGCCAG
CTGAGGCCAGGTGCACAGTGTGCATCTGACGGACCCTGTTGTCAAATTTGCCAGC
30 TGCGCCCGTCTGGCTGGCAGTGTCTCTACCAGAGGGGATTGTGACTTGCCTGA
ATTCTGCCCAGGAGACAGCTCCCAGTGTCCCCCTGATGTCAGCCTAGGGGATGGC
GAGCCCTGCGCTGGCGGGCAAGCTGTGTGCATGCACGGGCGTTGTGCCTCCTATG
CCCAGCAGTGCCAGTCACTTTGGGGACCTGGAGCCCAGCCCGCTGCGCCACTTTG
CCTCCAGACAGCTAATACTCGGGGAAATGCTTTTGGGAGCTGTGGGCGCAACCCC
35 AGTGGCAGTTATGTGTCTTGCACCCCTAGAGATGCCATTTGTGGGCAGCTCCAGT
GCCAGACAGGTAGGACCCAGCCTCTGCTGGGCTCCATCCGGGATCTACTCTGGGA
GACAATAGATGTGAATGGGACTGAGCTGAACTGCAGCTGGGTGCACCTGGACCT
GGGCAGTGATGTGGCCCAGCCCCCTCCTGACTCTGCCTGGCACAGCCTGTGGCCCT
GGCCTGGTGTGTATAGACCATCGATGCCAGCGTGTGGATCTCCTGGGGGCACAG
40 GAATGTGCAAGCAAATGCCATGGACATGGGGTCTGTGACAGCAACAGGCACTGC
TACTGTGAGGAGGGCTGGGCACCCCCTGACTGCACCACTCAGCTCAAAGCAACC
AGCTCCCTGACCACAGGGCTGCTCCTCAGCCTCCTGGTCTTATTGGTCCTGGTGAT
GCTTGGTGCCGGCTACTGGTACCGTGCCCGCCTGCACCAGCGACTCTGCCAGCTC
AAGGGACCCACCTGCCAGTACAGGGCAGCCCAATCTGGTCCCTCTGAACGGCCA
45 GGACCTCCGCAGAGGGCCCTGCTGGCACGAGGCACTAAGTCTCAGGGGCCAGCC
AAGCCCCCACCCCAAGGAAGCCACTGCCTGCCGACCCCCAGGGCCGGTGCCCA
TCGGGTGACCTGCCCCGGCCAGGGGCTGGAATCCCGCCCCTAGTGGTACCCTCCA
GACCAGCGCCACCGCCTCCGACAGTGTCTCGCTCTACCTCTGACCTCTCCGGAG
GTTCCGCTGCCTCCAAGCCGGACTTAGGGCTTCAAGAGGCGGGCGTGCCCTCTGG

AGTCCCCTACCATGACTGAAGGCGCCAGAGACTGGCGGTGTCTTAAGACTCCGG
GCACCGCCACGCGCTGTCAAGCAACACTCTGCGGACCTGCCGGCGTAGTTGCAG
CGGGGGCTTGGGGAGGGGCTGGGGGTTGGACGGGATTGAGGAAGGTCCGCACA
GCCTGTCTCTGCTCAGTTGCAATAAACGTGACATCTTGGGAGCGTTAAAAAAAAA
5 AAAAAA

SEQ ID NO: 419

>5982 BLOOD 410650.1 U59831 g1399236 Human transcription factor, forkhead related
activator 4 (FREAC-4) gene, complete cds. 0

10 AGCAAGCCCAAGAACAGCCTAGTGAAGCCGCCTTACTCGTACATCGCGCTCATC
ACCATGGCCATCCTGCAGAGCCCGCAGAAGAAGCTGACCCTGAGCGGCATCTGC
GAGTTCATCAGCAACCGCTTCCCCTACTACAGGGAGAAGTTCCCCGCCTGGCAGA
ACAGCATCCGCCACAACCTCTCGCTCAACGACTGCTTCGTCAAGATCCCCCGCGA
GCCCGGCAACCCGGGCAAGGGCAACTACTGGACGCTGGACCCGGAGTCCGCCGC
15 CTTGGGGACTCTGCACCAAGGGACTGCCCTGTCCAGTGTGAGAACTTTACTGCT
AGGATTTCCAATTGTAAATAACGCTATGTTAGCGCGCTCGAGGAAGAAGGTAGG
AATCCCGGCTCCTTTTCTCGTCTTGGTGGTTCGGTGTTCGCTCCTCCAGGC
GCGGCCCTCTCGACCTCGCGCGCCCATTTTCGCCGCTGCGAATTCTCGGACAAA
ACTGTCAACAGCCCGGGCGCGCCTTTTGGCTCTGCGGGTCCCTCTATTTATGCAA
20 AGCCGACCTATGCTACAGCCCCCAACCCCGACCTGGGGTAGGGAGGAAGAGG
GTGCCGGGGAAGGGAGTCCGCCCTGTCCAGGCACTAGAGGCTCCCTTGACGTTTG
GCAGATGAAAAACAATAAGCCTTTTGGAGGTGTAGAGATTCTCAGGTCCAGGC
AGTTAAAAAATAATGGTCAAAAAGAATAATACAAAAATAGTAAAGGTCTTGAAGAA
TGCCAGCGAAGCAATTCTTTTATTTGAGGACACTTGTCTGGTGTACTTTTTCAT
25 GAAAAGGAAAAATGGTTAACATGTTTACAGAAGAAAAAAGTCAAAATTATCAT
TTATTTCAACCTGTGTTTTGTATCATAACAGACGTGTGGATTTTTTTGTACTTACT
GCGTATTCTTTACAAGGAGTATTGTAAATTTTACTGGCAATTATTATTGTACTATT
CTAAATGTAAGATTTTACACTTTTTCAGAAATAAAAATGCTTAATTTTCAAAGA
AAATTCACCAAATG

30

SEQ ID NO: 420

>5987 BLOOD 220325.2 AF013988 g2318114 Human serine protease mRNA, complete cds.
0

35 ATCTCAGTGTAGCAGTTTTTCTATTGCTATATAACATATTCCTTAAAAATATAGCGG
TTTAAAGCTACACAGATGTCTTATCTCACTGTTCCAGAAGACAGGCATGGCTCAG
CTGGGATCTCTGCTTCAGTCTCAAAACGATGCAATCAAGGTGTCAGCAGGGCTGC
ATTTCTCCCTGGATGCTCAGAGGAAGAATCTACTTCCAAGCCTCTATGGTTTGAA
TGTGTCCTCTCCAAAATCCAGCTGTTGCCAATGGGATAGTATTAAGAGGTGGGGA
CACAGAGGTTCGGCAGGCAGCACACAGAGGGACCTACGGGCAGCTGTTCTTCCC
40 CCGACTCAAGAATCCCCGGAGGCCCGGAGGCCTGCAGCAGGAGCGGCCATGAAG
AAGCTGATGGTGGTGTGCTGAGTCTGATTGCTGCAGCCTGGGCAGAGGAGCAGAAT
AAGTTGGTGCATGGCGGACCCTGCGACAAGACATCTCACCCCTACCAAGCTGCCC
TCTACACCTCGGGCCACTTGCTCTGTGGTGGGGTCTTATCCATCCACTGTGGGTC
CTCACAGCTGCCCACTGCAAAAAACCGAATCTTCAGGTCTTCTTGGGGAAGCATA
45 ACCTTCGGCAAAGGGAGAGTTCCCAGGAGCAGAGTTCTGTTGTCCGGGCTGTGAT
CCACCCTGACTATGATGCCGCCAGCCATGACCAGGACATCATGCTGTTGCGCCTG
GCACGCCCAGCCAACTCTCTGAACCTATCCAGCCCCTTCCCCTGGAGAGGGACT
GCTCAGCCAACACCACAGCTGCCACATCCTGGGCTGGGGCAAGACAGCAGATG
GTGATTTCCCTGACACCATCCAGTGTGCATACATCCACCTGGTGTCCCGTGAGGA

GTGTGAGCATGCCTACCCTGGCCAGATCACCCAGAACATGTTGTGTGCTGGGGAT
GAGAAGTACGGGAAGGATTCTGCCAGGGTGATTCTGGGGGTCCGCTGGTATGT
GGAGACCACCTCCGAGGCCTTGTGTTCATGGGGTAACATCCCCTGTGGATCAAAG
GAGAAGCCAGGAGTCTACACCAACGTCTGCAGATACACGAACTGGATCCAAAAA
5 ACCATTTCAGGCCAAGTGACCCTGACATGTGACATCTACCTCCCGACCTACCACCC
CACTGGCTGGTTCAGAACGTCTCTCACCTAGACCTTGCCTCCCCCTCCTCTCCTGC
CCAGCTCTGACCCTGATGCTTAATAAACGCAGCGACGTGAGGGTCTGATTCTCC
CTGGTTTTACCCAGCTCCATCCTTGCATCACTGGGGAGGACGTGATGAGTGAGG
ACTTGGGTCTCGGTCTTACCCCCACCACTAAGAGAATACAGGAAAATCCCTTCT
10 AGGCATCTCCTCTCCCCAACCTTCCACACGTTTGATTCTTCTCCTGCAGAGGCCCA
GCCACGTGTCTGGAATCCCAGCTCCGCTGCTTACTGTCGGTGTCCCCTTGGGATG
TACCTTTCTTCACTGCAGATTTCTCACCTGTAAGATGAAGATAAGGATGATACAG
TCTCCATAAAGGCAGTGGCTGTTGGAAAGATTAAAGGTTTCACACCTATGACATAC
ATGGAATAGCACCTGGGCCACCATGCACTCAATAAAGAATGAATTTTATTATG

15 SEQ ID NO: 421

>6005 BLOOD 350249.10 U78180 g1871167 Human sodium channel 2 (hBNaC2) mRNA,
alternatively spliced, complete cds. 0

TTTTTTTTGGTTGAAACCCAGTTTATTAGACCAGAGGCATGCGTCACCCAGAGCC
20 CTGCCTGCTGTTCCCCTATCCAATGCACACTTTTTGGCCTCATTCTGCTTCCCTCT
GGGGAGGTATGATCTCTGAGGAACTCTTAGGAACCAAGAGATTCCAAAGATCC
TAGAGCCTTACTCTCCAGCTCCAGGCCAATGCGAGCTGCTCACAGGTCTTGTTCTG
GGATTGAAGACCAAGACACAGCTAGGGAAGGAAGGCCTGAAGAGGGGGTGGGG
CTCAGGCCTGGAAGGAGTGTCTGGTGGAGGGAGGGGGGGCAGGCCCTCCACCTC
25 ACTTGTCTCTCATTAGATAGGGTGAGACAACAGCAGAGCTTTCAACTCCTCCTC
TAGGCCTCTCTTCCCTCCCAAACCCACCTCACCAGAAAATAAAAGTGGTGGGCTT
GGGTATCAGGTGAGGAAAGGGGGCTGGGCACCCAGAAGGAGGAAAGGCCACTG
ACTGAGGACCTCAGCTTCTGCCTGTCAGCATCCCCTGCCCCAACTTCAGGAGTC
GCCAATCCCCAGCTCCCTTCTGTCTCTGACACACTTGGCTTAGTGTCCAGGGTAG
30 ACCTCCATCCCCTGGGTGGGGGCTATCTCTACAGCAACCCCTTCCCTGGGGATGC
CACTGTCAGCTGGGCAGAGGGCAATGGGATAGGAGGAGCAGGGGAAGAGAATG
TTAAGGCTGCAGGGAGGGCCGAGGGTGCCCGGGTTGGGGGAGAGGGTGAGGCC
AGAAAGAGGCAGAGCTTGTGATTACAGCTTCTTTGTCGCCACTGAGACAGTGC
AAAGGTTACAATGCGCGTGTCTCCTTGTGCTTCTCAGAGGGATGTGTGTACA
35 CAGTACAGACACCAGGGGAGAGAGTCCAACCTTTTATACAGGCAAGGCATTTCAG
AGACCAGGGAGGGAGTAGAAACATAGAAGGTGGAACCTTGGGGTGGGAGAATGG
TTCTCAGAGACAAGAGGGGATGGGGTGGAGACAGACAGGGCTGGGAAAGTATA
TACAGAGATATAGCAATATAGAGTCTGTATCATATAGAAATAGAAAATGCAGAT
GAGGTTGTTGAGAGAAGCAAATGAAGTTGGGGAAGAGGATGTGGGAGAGTTCCA
40 TAAGAAAATTTATGGACGTGGCCCTCTACAAGGGCCTCCGGGAGAGGGACCAGT
GAGGTTAGGCACTAGCGCCCTTCTCCCTGAGCTGGACGCTAACCAGCCGGTCTTT
AATGGGATGGTGAGGAAGGGCTGCCTCTTGGGATTTCTCTCCAGCAGCTGTGGGG
TGGGGGTGAACTTATAGGTATCAGGATGTAGCCTACAGCACCAGGGCCGCATCTT
GTCCCCATTACCACTTCTTAAGGGGATCCCCGACCCCCACGAGATTCCACATGGT
45 GTGAGAGAGTGGGGCTGAGGTTTTAGTTCCTGCCAGGAGACTTGGGTTTGGGGA
CAGTCACTGGGCTGAGAGGGTCTCTTAAGGCTGGGGAAGCCTCCCTCCCCACAC
TAGCCCTCCCCCTTAAGGTACATTCTCTGGTTTGGGGCCAAATTCAGACCCCAG
AGATCCCTTCCACCCCTCACTGGGAAGGGCCTTTGGTGACTGGTGGCAGCAGAAT
GTAGATGGACACTCAGATGGCAGACAGCTAGATAGACAGAATTCAGGCTGGGAG

CTAGGGGAGGCAGCATGGAGGAGAGAGGGGGCAGCCTGAGGTCCCTTGCCCCGTT
 CTCCTTTTTAGTTCTTTTTTAGATTAGTTTTGTAAATGTAAAAGAATGGGATAG
 AGGCAGAGAGAGGACTCTATGGTCAAGACTCCTTCCCTTACCACAGACAAGAGGA
 AAGATCTGCCCCGGAGTGTGGGGAGTCCCAGGGCAGATGTGAGGAGGCAGCTGG
 5 GGGCCCCCGCTCTCCTAGTCCCTCCCATCTAGGCCTTTGGTTCAGCGGCCTGCG
 GGGCTCAGCAGGTAAAGTCCTCGAACGTGCCTCGGGCCGGATGGTGAGGTAGGA
 TGTGTCAGCGTATGTCATCCCGGCAGGGTGGCCCCGAAGGCTCTCGCACGGGT
 GTGTCTTTTGACGTCGTCCAGGCTGAGGGCCACGCCCTTGTCGCACTGCTCCTTT
 TGGCCTCCTTCTGGCATTTCCTCGTCGGCACAGCTTGTGCTTAATGACCTCGTAG
 10 GCGTAGTCAAAGAGCTCCAGCACCGTGAGGATGCTGGCCCCGATGAACAGCCCC
 ATCTGGCCCCCGATGTCACCAAGACAACAGGGTTTGGGGAAGGGCCTCTGGGGT
 GGAGGACCCTCATGGGACAGAAGTGAGCACCTGCTTTTGGATGATAGGGAGCC
 ACGCCATGCCCATGGCATGAGAAGGGGACAGGTGTCATCAGCAGCTCACCCAGG
 AGCCCTGCAATCTCATAGGCCTTCTTCTGTTCAATGGTCTCATAGTTGAGGACTTC
 15 AAAGAAAATGTCCAGCACCAAGGATGTTCTCCCCTATGTATTGCTCAGATTTGTTG
 AACTTCTTGGCCAGGTACTTGGCTGAGGCTTTGCTGGGGATCTTGACCATGGACA
 GCTCTTTGCCATAGCGGGTCAGGTTGCAAGGCATTTACACACGCAGTACTCCTG
 GTCCTTCTCCACCAGGAAGTCCAGAGCAGGATCTGCACACTCCTTGTACTGCTCT
 GGAGTACAGTATGGGGCATCCCCTGGCATGTGCACCATGCGGCAGTTGCAGTTCT
 20 CCACCAGGTAGCGCGTCTCACAGTCGATGCGGCAGGCAGTGATGCTGTAGGAGT
 CGAAGAAATCCAAATCCGAGTCCATGGTAACAGCTTTGCAGGTGCCCCAGGGTG
 GGGGCAGGTAGATGAGCCGCTGCTCCTGGCAGGCCACAAAGGTCTGGAAGCCTG
 GGGCCACGCCAAAGCCAGCTGGTGGATGAAGGAGGTTTCATCCTGACTATGGA
 TCTGCACTTTGATGCCTGCTTCGAAGGACGTCTCGTCAGTCTCCCCCACAGAG
 25 CAGGTACTCGTCTGCTGGATGTCCAGCATGATTTCCAGCCCATTTGCCCGTCCCA
 TCCTTCATGGTCTTCAGCCGCGGCCGCCATCTCGGCCCGAGTTGAACGTGTAGC
 ACTTTCCATAGCGTGTGAAGACCACCTTGAAGTCTTCAGCGCTGCAGACCTCCCC
 CCGGAAGTGGCAGGAGAGCAGCATGTCTCGAATGTCGTGCCAGCTCGGTCTGTA
 GAACTCACGCATGTTGAAGGGTTTGGGTTTGAAGCTGCGGAAGTTGGCTTTGTCC
 30 TGCAGTATCTCCAGCTGCTTTTCATCTGCCATCTGTGTGTCTGGTATCTCATACCT
 GTTGTGAGCAGGGCCAGCAGCTCCCCAGCATGATACAGGTCATTCTTGAGACT
 TGGCTAAAGCGGAACCTCGTTGAGGTTGCACAGCGTGACAGCAGGGAAGGTAAGC
 TGAGAGGCAGCCACCTCGTCGAGCTTGGTGACATGGTGGTAGTGGAAGTAGTAC
 TGCACACGCTCCGTGCACACACACAGCAGCACAGCCAGCGAGCCCAGGAAGCAC
 35 AGGGCCCACAGTGCCCGCTTCAGAGACAGCCGCTCGTAGGAGAAGATGTGGGCC
 AGGCCGTGCAGTGTGGAGCTGCTGGCGAAGGCCTGGATGCTCACCGGCTGGACG
 CCACCCACCTCCTCCTCCTCGGCCTTCAGTTCCATCCTTGTTGAGGGGATCCTGAG
 GGGGCTTCGGCAAGCCGGCAGCCGGCGGGCTCCTGGGGCGCTGGACCGGTGG
 CGGGCTCAGCGCCGAGTCGCGGAGGGGCTCATGGCCCCGGGGCCGGAGCCCCGCGG
 40 CCGCCGCGGCACGCCGCGCAGAGCCCTGCAGGGAGCGCCCCGCCCCGCGCT
 CGGCTCCGATCTGTCCGCCCGCCCGCGCGCTGGCTCGCTGGCTC

SEQ ID NO: 422

>6009 BLOOD gi|2281751|gb|U79666.1|HSU79666 Homo sapiens alpha1A-voltage-
 45 dependent calcium channel mRNA, splice form BI-1-Vi-GGCAG, complete cds
 GGCTCGGCCCGGGCAGCCGCCTTCTGAGCCCCGACCCGAGGCGCCGAGCCGCC
 GCCGCCCGATGGGCTGGGCCGTGGAGCGTCTCCGCAGTCGTAGCTCCAGCCGCC
 GCGCTCCAGCCCCGGCAGCCTCAGCATCAGCGGCGGCGGCGGCGGCGGCGGCG
 CCGTCTTCCGCATCGTTCCGCCGAGCGTAACCCGGAGCCCTTTGCTCTTTGCAGA

ATGGCCCGCTTCGGAGACGAGATGCCGGCCCGCTACGGGGGAGGAGGCTCCGGG
GCAGCCCGCCGGGGTGGTCGTGGGCAGCGGAGGCGGGCGAGGAGCCGGGGGCAG
CCGGCAGGGCGGGCAGCCCGGGGCGCAAAGGATGTACAAGCAGTCAATGGCGC
AGAGAGCGCGGACCATGGCACTCTACAACCCCATCCCCGTCCGACAGAACTGCC
5 TCACGGTTAACCGGTCTCTCTTCCTCTTCAGCGAAGACAACGTGGTGAGAAAATA
CGCCAAAAAGATCACCGAATGGCCTCCCTTTGAATATATGATTTTAGCCACCATC
ATAGCGAATTGCATCGTCCTCGCACTGGAGCAGCATCTGCCTGATGATGACAAGA
CCCCGATGTCTGAACGGCTGGATGACACAGAACCATACTTCATTGGAATTTTTTG
TTTCGAGGCTGGAATTAATAATCATTGCCCTTGGGTTTGCCTTCCACAAAGGCTCC
10 TACTTGAGGAATGGCTGGAATGTCATGGACTTTGTGGTGGTGCTAACGGGCATCT
TGGCGACAGTTGGGACGGAGTTTGACCTACGGACGCTGAGGGCAGTTCGAGTGC
TGCGGCCGCTCAAGCTGGTGTCTGGAATCCCAAGTTTACAAGTCGTCCTGAAGTC
GATCATGAAGGCGATGATCCCTTTGCTGCAGATCGGCCTCCTCCTATTTTTTGCAA
TCCTTATTTTTGCAATCATAGGGTTAGAATTTTATATGGGAAAATTTTCATACCACC
15 TGCTTTGAAGAGGGGACAGATGACATTCAGGGTGAGTCTCCGGCTCCATGTGGG
ACAGAAGAGCCCCGCCGCACCTGCCCAATGGGACCAAATGTCAGCCCTACTGG
GAAGGGCCCAACAACGGGATCACTCAGTTCGACAACATCCTGTTTGCAGTGCTG
ACTGTTTTCCAGTGCATAACCATGGAAGGGTGGACTGATCTCCTCTACAATAGCA
ACGATGCCTCAGGGAACACTTGGAACTGGTTGTACTTCATCCCCCTCATCATCAT
20 CGGCTCCTTTTTTATGCTGAACCTTGTGCTGGGTGTGCTGTCAGGGGAGTTTGCCA
AAGAAAGGGAACGGGTGGAGAACCGGCGGGCTTTTCTGAAGCTGAGGCGGCAA
CAACAGATTGAACGTGAGCTCAATGGGTACATGGAATGGATCTCAAAAGCAGAA
GAGGTGATCCTCGCCGAGGATGAAACTGACGGGGAGCAGAGGCATCCCTTTGAT
GGAGCTCTGCGGAGAACCACCATAAAGAAAAGCAAGACAGATTTGCTGAACCCG
25 GAAGAGGCTGAGGATCAGCTGGCTGATATAGCCTCTGTGGGTCTCCTTCGCCC
GAGCCAGCATTAATAAGTGCCAAGCTGGAGAACTCGACCTTTTTTCACAAAAGG
AGAGGAGGATGCGTTTCTACATCCGCCGCATGGTCAAACTCAGGCCTTCTACTG
GACTGTACTCAGTTTGGTAGCTCTCAACACGCTGTGTGTTGCTATTGTTCACTACA
ACCAGCCCGAGTGGCTCTCCGACTTCCTTTACTATGCAGAATTCATTTTCTTAGGA
30 CTCTTTATGTCCGAAATGTTTATAAAAATGTACGGGCTTGGGACGCGGCCTTACT
TCCACTCTTCCTTCAACTGCTTTGACTGTGGGGTTATCATTGGGAGCATCTTCGAG
GTCATCTGGGCTGTCATAAAACCTGGCACATCCTTTGGAATCAGCGTGTTACGAG
CCCTCAGGTTATTGCGTATTTTCAAAGTCACAAAGTACTGGGCATCTCTCAGAAA
CCTGGTCGTCTCTCTCCTCAACTCCATGAAGTCCATCATCAGCCTGTTGTTTCTCC
35 TTTTCTGTTTCATTGTCGTCTTCGCCCTTTTGGGAATGCAACTCTTCGGCGGCCAG
TTTAATTTTCGATGAAGGGACTCCTCCCACTTTCGATACTTTTCCAGCAGCAA
TAATGACGGTGTTTCAGATCCTGACGGGCGAAGACTGGAACGAGGTCATGTACG
ACGGGATCAAGTCTCAGGGGGGCGTGCAGGGCGGCATGGTGTTCTCCATCTATTT
CATTGTACTGACGCTCTTTGGGAACTACACCCTCCTGAATGTGTTCTTGGCCATCG
40 CTGTGGACAATCTGGCCAACGCCAGGAGCTACCAAGGACGAGCAAGAGGAAG
AAGAAGCAGCGAACCAGAACTTGCCCTACAGAAAGCCAAGGAGGTGGCAGAA
GTGAGTCCTCTGTCCGCGGCCAACATGTCTATAGCTGTGAAAGAGCAACAGAAG
AATCAAAAGCCAGCCAAGTCCGTGTGGGAGCAGCGGACCAGTGAGATGCGAAA
GCAGAACTTGCTGGCCAGCCGGGAGGCCCTGTATAACGAAATGGACCCGGACGA
45 GCGCTGGAAGGCTGCCTACACGCGGCACCTGCGGCCAGACATGAAGACGCACTT
GGACCGGCCGCTGGTGGTGGACCCGCAGGAGAACCGCAACAACAACCAACA
AGAGCCGGGCGGCCGAGCCACCGTGGACCAGCGCCTCGGCCAGCAGCGCGCCG
AGGACTTCCTCAGGAAACAGGCCCGCTACCACGATCGGGCCCCGGGACCCAGCG
GCTCGGCGGGCCTGGACGCACGGAGGCCCTGGGCGGGAAGCCAGGAGGCCGAG

CTGAGCCGGGAGGGACCCTACGGCCGCGAGTCGGACCACCACGCCCCGGGAGGGC
AGCCTGGAGCAACCCGGGTCTGGGAGGGCGAGGCCGAGCGAGGCAAGGCCGG
GGACCCCCACCGGAGGCACGTGCACCGGCAGGGGGGAGCAGGGGAGAGCCGCA
GCGGGTCCCCGCGCACGGGCGCGGACGGGGAGCATCGACGTCATCGCGCGCACC
5 GCAGGCCCGGGGAGGAGGGTCCGGAGGACAAGGCGGAGCGGAGGGGCGCGGCAC
CGCGAGGGCAGCCGGCCGGCCCCGGGGCGGGCGAGGGCGAGGGCCCCGA
CGGGGGCGAGCGCAGGAGAAGGCACCGGCATGGCGCTCCAGCCACGTACGAGG
GGGACGCGCGGAGGGAGGACAAGGAGCGGAGGCATCGGAGGAGGAAAGAGAA
CCAGGGCTCCGGGGTCCCTGTGTCTGGGCCCAACCTGTCAACCACCCGGCCAATC
10 CAGCAGGACCTGGGCCGCCAAGACCCACCCCTGGCAGAGGATATTGACAACATG
AAGAACAACAAGCTGGCCACCGCGGAGTCGGCCGCTCCCCACGGCAGCCTTGGC
CACGCCGGCCTGCCCCAGAGCCCAGCCAAGATGGGAAACAGCACCGACCCCGGC
CCCATGCTGGCCATCCCTGCCATGGCCACCAACCCCCAGAACGCCGCCAGCCGCC
GGACGCCCAACAACCCGGGGAACCCATCCAATCCCGGGCCCCCCCCAAGACCCCG
15 AGAATAGCCTTATCGTCACCAACCCAGCGGCACCCAGACCAATTGAGCTAAGA
CTGCCAGGAAACCCGACCACACCACAGTGGACATCCCCCAGCCTGCCACCCC
CCCTCAACCACACCGTCTGTACAAGTGAACAAAAACGCCAACCCAGACCCACTGC
CAAAAAAAGAGGAAGAGAAGAAGGAGGAGGAGGAAGACGACCGTGGGGAAGA
CGGCCCTAAGCCAATGCCTCCCTATAGCTCCATGTTTCATCCTGTCCACGACCAAC
20 CCCCTTCGCCGCCTGTGCCATTACATCCTGAACCTGCGCTACTTTGAGATGTGCAT
CCTCATGGTCATTGCCATGAGCAGCATCGCCCTGGCCGCCGAGGACCCTGTGCAG
CCCCAACGCACCTCGGAACAACGCTGCTGCGATACTTTGACTACGTTTTTACAGGCG
TCTTTACCTTTGAGATGGTGATCAAGATGATTGAGCTGGGGCTCGTCCTGCATCA
GGGTGCCTACTTCCGTGACCTCTGGAATATTCTCGACTTCATAGTGGTEAGTGGG
25 GCCCTGGTAGCCTTTGCCTTCACTGGCAATAGCAAAGGAAAAGACATCAACACG
ATTAAATCCCTCCGAGTCCTCCGGGTGCTACGACCTCTTAAAACCATCAAGCGGC
TGCCAAAGCTCAAGGCTGTGTTTGACTGTGTGGTGAACCTCACTTAAAAACGTCTT
CAACATCCTCATCGTCTACATGCTATTTCATGTTTCATCTTCGCCGTGGTGGCTGTGC
AGCTCTTCAAGGGGAAATTCTTCCACTGCACTGACGAGTCCAAAGAGTTTGAGAA
30 AGATTGTGCGAGGCAAATACCTCCTCTACGAGAAGAATGAGGTGAAGGCGCGAGA
CCGGGAGTGGAAGAAGTATGAATTCCATTACGACAATGTGCTGTGGGCTCTGCTG
ACCCTCTTCAACCGTGTCCACGGGAGAAGGCTGGCCACAGGTCCTCAAGCATTCTGG
TGGACGCCACCTTTGAGAACCAGGGCCCCAGCCCCGGGTACCGCATGGAGATGT
CCATTTTCTACGTCGTCTACTTTGTGGTGTTCCTTCTTCTTGTCAATATCTTTG
35 TGGCCTTGATCATCATCACCTTCCAGGAGCAAGGGGACAAGATGATGGAGGAAT
ACAGCCTGGAGAAAAATGAGAGGGCCTGCATTGATTTCCGCATCAGCGCCAAGC
CGCTGACCCGACACATGCCGAGAACAAAGCAGAGCTTCCAGTACCGCATGTGGC
AGTTCGTGGTGTCTCCGCCTTTCGAGTACACGATCATGGCCATGATCGCCCTCAA
CACCATCGTGCTTATGATGAAGTTCTATGGGGCTTCTGTTGCTTATGAAAATGCC
40 CTGCGGGTGTTCAACATCGTCTTACCTCCCTCTTCTCTCTGGAATGTGTGCTGAA
AGTCATGGCTTTTGGGATTCTGAATTATTTCCGCGATGCCTGGAACATCTTCGACT
TTGTGACTGTTCTGGGCAGCATCACCGATATCCTCGTGACTGAGTTTGGGAATAA
CTTCATCAACCTGAGCTTTCTCCGCCTCTTCCGAGCTGCCCGGCTCATCAAACCTC
TCCGTCAGGGTTACACCATCCGCATTCTTCTCTGGACCTTTGTGCAGTCCTTCAAG
45 GCCCTGCCTTATGTCTGTCTGCTGATCGCCATGCTCTTCTTCATCTATGCCATCAT
TGGGATGCAGGTGTTTGGTAACATTGGCATCGACGTGGAGGACGAGGACAGTGA
TGAAGATGAGTTCCAAATCACTGAGCACAATAACTTCCGGACCTTCTTCCAGGCC
CTCATGCTTCTTCTCCGGAGTGCCACCGGGGAAGCTTGGCACAACATCATGCTTT
CCTGCCTCAGCGGGAAACCGTGTGATAAGAACTCTGGCATCCTGACTCGAGAGT

GTGGCAATGAATTTGCTTATTTTTACTTTGTTTCCTTCATCTTCCTCTGCTCGTTTC
 TGATGCTGAATCTCTTTGTCGCCGTCATCATGGACAACCTTTGAGTACCTCACCCG
 AGACTCCTCCATCCTGGGCCCCCACCACCTGGATGAGTACGTGCGTGTCTGGGCC
 GAGTATGACCCCGCAGCTTGCGGTCGGATTCAATTATAAGGATATGTACAGTTTAT
 5 TACGAGTAATATCTCCCCCTCTCGGCTTAGGCAAGAAATGTCCTCATAGGGTTGC
 TTGCAAGCGGCTTCTGCGGATGGACCTGCCCCGTCGCAGATGACAACACCGTCCAC
 TTCAATTCCACCCTCATGGCTCTGATCCGCACAGCCCTGGACATCAAGATTGCCA
 AGGGAGGAGCCGACAAACAGCAGATGGACGCTGAGCTGCGGAAGGAGATGATG
 GCGATTTGGCCCAATCTGTCCCAGAAGACGCTAGACCTGCTGGTCACACCTCACA
 10 AGTCCACGGACCTCACCGTGGGGAAGATCTACGCAGCCATGATGATCATGGAGT
 ACTACCGGCAGAGCAAGGCCAAGAAGCTGCAGGCCATGCGCGAGGAGCAGGAC
 CGGACACCCCTCATGTTCCAGCGCATGGAGCCCCCGTCCCCAACGCAGGAAGGG
 GGACCTGGCCAGAACGCCCTCCCCTCCACCCAGCTGGACCCAGGAGGAGCCCTG
 ATGGCTCACGAAAGCGGCCTCAAGGAGAGCCCGTCCCTGGGTGACCCAGCGTGCC
 15 CAGGAGATGTTCCAGAAGACGGGCACATGGAGTCCGGAACAAGGCCCCCCCTACC
 GACATGCCCAACAGCCAGCCTAACTCTCAGTCCGTGGAGATGCGAGAGATGGGC
 AGAGATGGCTACTCCGACAGCGAGCACTACCTCCCCATGGAAGGCCAGGGCCGG
 GCTGCCTCCATGCCCCGCTCCCTGCAGAGAACCAGAGGAGAAGGGGGCCGCCA
 CGTGGGAATAACCTCAGTACCATCTCAGACACCAGCCCCATGAAGCGTTCAGCCT
 20 CCGTGCTGGGCCCCAAGGCCCGACGCCTGGACGATTACTCGCTGGAGCGGGTCC
 CGCCCGAGGAGAACCAGCGGCACCACCAGCGGCGCCGCGACCGCAGCCACCGCG
 CCTCTGAGCGCTCCCTGGGCGGCTACACCGATGTGGACACAGGCTTGGGGACAG
 CCTGAGCATGACCACCCAATCCGGGGACCTGCCGTGGAAGGAGCGGGAGCAGG
 AGCGGGGCGGGCCCAAGGATGGGAAGCATCGACAGCACCAACCACCAACCAACC
 25 ACCACCAACATCCCCCGCCCCCGACAAGGACCGCTATGCCCAGGAACGGCCGG
 ACCACGGCCGGGCACGGGCTCGGGACCAGCGCTGGTCCCGCTCGCCAGCGAGG
 GCCGAGAGCACATGGCGCACCGGCAGGGCAGTAGTTCCGTAAGTGGAAGCCAG
 CCCCCTCAACATCTGGTACCAGCACTCCGCGGCGGGGCGCCGCGCAGCTCCCCCA
 GACCCCTCCACCCCCCGGCCACACGTGTCCTATTCCCCTGTGATCCGTAAGGCC
 30 GGCGGCTCGGGGCCCCCGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGG
 GGTGGCCAGGCCGGGCGGGCGGCCACCAGCGGCCCTCGGAGGTACCCAGGCC
 CACGGCCGAGCCTCTGGCCGGAGATCGGCCGCCACGGGGGGCCACAGCAGCGG
 CCGCTCGCCAGGATGGAGAGGCGGGTCCCAGGCCCGGCCGGAGCGAGTCCCC
 CAGGGCCTGTGACACGGCGGGGCCCCGGTGGCCGGCATCTGGCCCGCACGTGTC
 35 CGAGGGGCCCCCGGGTCCCCGGCACCATGGCTACTACCGGGGCTCCGACTACGA
 CGAGGCCGATGGCCCGGGCAGCGGGGGCGGCGAGGAGGCCATGGCCGGGGCCT
 ACGACGCGCCACCCCCCGTACGACACGCGTCTCGGGCGCCACCGGGCGCTCGC
 CCAGGACTCCCCGGGCTCGGGCCCCGGCCTGCGCCTCGCCTTCTCGGCACGGCCG
 GCGACTCCCCAACGGCTACTACCCGGCGCACGGACTGGCCAGGCCCGCGGGGCC
 40 GGGCTCCAGGAAGGGCCTGCACGAACCCTACAGCGAGAGTGACGATGATTGGTG
 CTAAGCCCGGGCGAGGGAATTCGATATCAAGCTTATCGATACCGTCGACCTCGA
 GGGGGGGCCCGGTACCAATTCGCCCTATAGTGAGTCGTATTA

SEQ ID NO: 423

45 >6010 BLOOD Hs.75794 gnl|UG|Hs#S2650864 Homo sapiens cDNA FLJ12746 fis, clone
 NT2RP2000842, highly similar to Human lysophosphatidic acid receptor homolog mRNA
 /cds=UNKNOWN /gb=AK022808 /gi=10434421 /ug=Hs.75794 /len=2687
 ACGGCGCGCTGGGCTCACACTGTCCCGCCGCGGACGGGCTTTGTGGTTGGGGGC
 GCGCGTGCGAGTGCCAGTGAGAGTGTGGGTGCGCGCTGTGGGCCGCGGCGCGGG

TGGGTGGCCGTGCGTTCTTGCGAGCCGGCCTGCAGGAGGCGAGGCTCCCCTGGCC
TCCCGCACCCAGCGGCGGACCGAGCCCCTGGAGGGAAGTTGCCGCAGCCGCCCCG
GGCCGCCGGCCCTCCTGTCCCGCGCCAGGTACACAGCTTCTCCTAGCATGACTTC
GATCTGATCAGCAAACAAGAAAATTTGTCTCCCGTAGTTCTGGGGCGTGTTACC
5 ACCTACAACCACAGAGCTGTCATGGCTGCCATCTCTACTTCCATCCCTGTAATTTT
ACAGCCCCAGTTCACAGCCATGAATGAACCACAGTGCTTCTACAACGAGTCCATT
GCCTTCTTTTATAACCGAAGTGGAAGCATCTTGCCACAGAATGGAACACAGTCA
GCAAGCTGGTGATGGGACTTGGAATCACTGTTTGTATCTTCATCATGTTGGCCAA
CCTATTGGTCATGGTGGCAATCTATGTCAACCGCCGCTTCCATTTTCTTATTATT
10 ACCTAATGGCTAATCTGGCTGCTGCAGACTTCTTTGCTGGGTGGCCTACTTCTAT
CTCATGTTCAACACAGGACCCAATACTCGGAGACTGACTGTTAGCACATGGCTCC
TTCGTCAGGGCCTCATTGACACCAGCCTGACGGCATCTGTGGCCAACTTACTGGC
TATTGCAATCGAGAGGCACATTACGGTTTTCCGCATGCAGCTCCACACACGGATG
AGCAACCGGCGGGTAGTGGTGGTCATTGTGGTCATCTGGACTATGGCCATCGTTA
15 TGGGTGCTATACCCAGTGTGGGCTGGAAGTGTATCTGTGATATTGAAAATTGTTT
CAACATGGCACCCCTCTACAGTGACTCTTACTTAGTCTTCTGGGCCATTTTCAACT
TGGTGACCTTTGTGGTAATGGTGGTTCTCTATGCTCACATCTTTGGCTATGTTTCGC
CAGAGGACTATGAGAATGTCTCGGCATAGTTCTGGACCCCGCGGAATCGGGAT
ACCATGATGAGTCTTCTGAAGACTGTGGTCATTGTGCTTGGGGCCTTTATCATCTG
20 CTGGACTCCTGGATTGGTTTTGTTACTTCTAGACGTGTGCTGTCCACAGTGCGACG
TGCTGGCCTATGAGAAATTCTTCCTTCTCCTTGCTGAATTCAACTCTGCCATGAAC
TCCCATCATTTACTCCTACCGCGACAAAGAAATGAGCGCCACCTTTAGGCAGATCCCT
TCTGCTGCCAGCGCAGTGAGAACCCACCGGCCCAACAGAAGGGTCCAGACCGCTT
TGGGCTTCTCCTCAAGCACACCATCTTGGCTGGAGTTCACAGCAATGACCACTC
25 TGTGGTTTTAGAACGGAAGTGTGAGATGAGGAACCGCGTCTCTTGGAGGAT
AAACAGCCTCCCCCTACCCAATTGCCAGGGCAAGGTGGGGTGTGAGAGAGGAGA
AAAGTCAACTCATGTACTTAAACACTAACCAATGACAGTATTTGTTTCTGGACCC
CACAAGACTTGATATATATTGAAAATTAGCTTATGTGACAACCTCATCTTGATC
CCCATCCCTTCTGAAAGTAGGAAGTTGGAGCTCTTGCAATGGAATTCAAGAACAG
30 ACTCTGGAGTGTCCATTTAGACTACACTAACTAGACTTTTAAAAGATTTTGTGTG
GTTTGGTGCAAGTCAGAATAAATTCTGGCTAGTTGAATCCACAACCTTCATTTATA
TACAGGCTTCCCTTTTTTTATTTTTTAAAGGATACGTTTCACTTAATAAACACGTTTA
TGCCTATCAGCATGTTTGTGATGGATGAGACTATGGACTGCTTTTAAACTACCAT
AATTCATTTTTTCCCTTACATAGGAAAAGTGTAAAGTTGGAATTATCTTTTGTTTA
35 GAAAGCATGCATGTAATGTATGTATGCAGTATGCCTTACTTAAAAAGATTAAAAAG
GATACTAATGTTAAATCTTCTAGGAAATAGAACCTAGACTTCAAAGCCAGTATTT
GTTTAGGTCATGAAGCAAACAATGCTCTAATCACAATATTAAGTGTTAATTAAA
ATGTTGTAACAAGTATAAAACAGGGAATGTAAGTTTATTACCAAAGTGATATGTA
TTCCAAAAAAGTCATAGAAGATGAAGCACTATAATATTGTTCCCATATATTTAAA
40 ATACCCAAGTACATTCTAATTACCAGTATATCAGAGGAAAATTTTCGTAGTCTTT
GTAAAATAATATACTCATCATAGAAAAGTGAAGAAATGCAGAAATGTATAAAAA
AGCAAAAATGATTACTGATAATATCACAACCCAGAAGTAACCACCTTTAAAAAG
CAACCCCATGTATGCCTATATGTGTATTGTATACTTTTTTTTACATAATTGGAGTC
ATACTGTAAACAGTTTTTATAAGTAGATCTTTTTTCATTGCAAAATTGCCACATTTTC
45 TTATGGCATTAAAAATTTTACAAAAACATAATTTTAATGGCTATATTATATTCCAT
TTAATGGATGCAACTCAGTTTATTTAACCATTTCCCATGTTGTAACTATTTAGGTT
GTTTCTAATTTTCATTATTATAAAGTTGCAGAAATTTGGTGT

SEQ ID NO: 424

>6044 BLOOD 1089570.2 L35539 g577412 Human G-protein-coupled receptor (GPR1)
gene, complete cds. 0

5 GATAAAAGTGGAATGAGGAATGCAGCCGTTCTGAACACCACCCTCCATTTTCATTC
TGGAACCGGGAAGGTACACCCAGGCATGACAATAGCTTCTCTCCTCACAGAAAT
TTAACTGATTTCTTCATTCTCCATTTAGCAAGGTCATGGAAGATTTGGAGGAAAC
ATTATTTGAAGAATTTGAAAACCTATTCCTATGACCTAGACTATTACTCTCTGGAGT
CTGATTTGGAGGAGAAAGTCCAGCTGGGAGTTGTTCACTGGGTCTCCCTGGTGTT
10 ATATTGTTTGGCTTTTGTCTGGGAATTCCAGGAAATGCCATCGTCATTTGGTTCA
CGGGGTTCAAGTGAAGAAGACAGTCACCACTCTGTGGTTCCTCAATCTAGCCAT
TGCGGATTTTCATTTTCTTCTCTTTCTGCCCCTGTACATCTCCTATGTGGCCATGAA
TTTCCACTGGCCCTTTGGCATCTGGCTGTGCAAAGCCAATTCCTTCACTGCCCAGT
TGAACATGTTTGCCAGTGTTTTTTTCTGACAGTGATCAGCCTGGAGCACTATATT
CACTTGATCCATCCTGTCTTATCTCATCGGCATCGAAACCTCAAGAACTCTCTGAT
15 TGTCATTATAT

SEQ ID NO: 425

>6051 BLOOD gi|762887|gb|U16953.1|HSU16953 Human potassium channel beta3 subunit
mRNA, complete cds

20 GCAAGATACAGTGAGTCTTAAAGTTAAGCACCGTGCAATTAGCTTTGCTTCCTTG
GGTTTTTGAACATGCATCTGTATAAACCTGCCTGTGCAGACATCCCGAGCCCCA
AGCTGGGTCTGCCAAAATCCAGTGAATCGGCTCTAAAATGTAGATGGCACCTAG
CAGTGACCAAGACTCAGCCTCAGGEGGCCTGCAAACCTGTGAGGCCCAGTGGAG
CAGCCGAACAGAAATATGTGGAAAAGTTTCTACGTGTTTCATGGAATTTCTGTGCA
25 GGAAACCACCAGAGCAGAGACGGGCATGGCATAACAGGAATCTTGGAAAATCAG
GACTCAGAGTTTCTTGCTTGGGTCTTGGAACATGGGTGACATTTGGAGGTCAAAT
TTCAGATGAGGTTGCTGAACGGCTGATGACCATCGCCTATGAAAGTGGTGTTAAC
CTCTTTGATACTGCCGAAGTCTATGCTGCTGGAAAGGCTGAAGTGATTCTGGGGA
GCATCATCAAGAAGAAAGGCTGGAGGAGGTCCAGTCTGGTCATAACAACCAAAC
30 TCTACTGGGGTGGAAAAGCTGAAACAGAAAGAGGGCTGTCAAGAAAGCATATTA
TTGAAGGATTGAAGGGCTCCCTCCAGAGGCTGCAGCTCGAGTATGTGGATGTGGT
CTTTGCAAATCGACCGGACAGTAACACTCCCATGGAAGAAATTGTCCGAGCCAT
GACACATGTGATAAACCAAGGCATGGCGATGTACTGGGGCACCTCGAGATGGAG
TGCTATGGAGATCATGGAAGCCTATTCTGTAGCAAGACAGTTCAATATGATCCCA
35 CCGGTCTGTGAACAAGCTGAGTACCATCTTTTCCAGAGAGAGAAAGTGGAGGTC
CAGCTGCCAGAGCTCTACCACAAAATAGGTGTTGGCGCAATGACATGGTCTCCAC
TTGCCTGTGGAATCATCTCAGGAAAATACGGAAACGGGGTGCCTGAAAGTTCCA
GGGCTTCACTGAAGTGCTACCAAGTGGTTGAAAGAAAGAATTGTAAGTGAAGAAG
GGAGAAAACAGCAAAACAAGCTAAAAGACCTTTCCCCAATTGCGGAGCGTCTGG
40 GATGCACACTACCTCAGCTAGCTGTTGCGTGGTGCCTGAGAAATGAAGGTGTGA
GTTCTGTGCTCCTGGGATCATCCACTCCTGAACAACCTATTGAAAACCTTGGTGC
CATTCAGGTTCTCCCAAAGATGACATCACATGTGGTAAATGAGATTGATAACATA
CTGCGCAACAAGCCCTACAGCAAGAAGGACTATAGATCATAAGGCAATGCATGA
ACCACAGAAGCTGCATGGTTAAAATAGCGGCCTGTGCCCAGTACAGAAAGGTGT
45 TACTAACCAGTCTTTTGAATCACTTAGCAGCTTGCTGCAACCTCTAGTGTCCCTCC
CTGGATTCTTTGAGGTGTCTGACTGTCGCTACCACTGTGCACATCTGAAAACCTCA
CAACCAAGAAAATCCATTCTATTTTCTTATCTTGGACTGGAGTCACCTATTATTGC
ATTGCTGTATACACCTCATGCTTATGCAATGGG

SEQ ID NO: 426

>6117 BLOOD 197754.2 U67319 g1894912 Human Lice2 beta cysteine protease mRNA,
complete cds. 0

5 GACTTCAATCATCACCCAAATGTTGCTAACTCCCAAAGGCCTGCCTCCATCCAGA
CCTATCTTCCAGAGCTCCCCACTCACAGGCACAGGAGTCACTACGTACGCATTTA
CTGTGTACCGTTTTAGGGGCTGGTCTGCAGTGAACCAGACTGCCTGTGTCCATGG
AGCTTAGAAGAAGTGGGAAGAGCATTATCAGGCTACGAAGACAGAGTGGGGTA
AAACAGCAGAGATCAATGAGATCAGAGCACACCCTCGGAGGAAGGGATACATG
ACAAATGCCTGAACGGAGAGAGGGAGTGAAGTGTGCAAACACACAGCCAGGAG
10 TTTTCCAAGGACAGGGAGGAGAAAGTATAAGGCCTGCTGTACCCTCGATGCAAA
ACATGAGAAAGCCGACTGTGCCAGTCCCAGCCGCCCTACCGCCGTGGGAACGAT
GCTGTAATGGACTGTGTTGGTTGGCCTCCAGGCAGGAAGTGGCACTTGGAAG
AACACCAGCTGCGGTGGTAGCAGTGGGATTTGTGCTTCTTATGTTACCCAGATGG
CAGATGATCAGGGCTGTATTGAAGAGCAGGGGGTTGAGGATTCAGCAAATGAAG
15 ATTCAGTGGATGCTAAGCCAGACCGGTCTCTGTTTGTACCGTCCCTCTTCAGTAA
GAAGAAGAAAAATGTCACCATGCGATCCATCAAGACCACCCGGGACCGAGTGCC
TACATATCAGTACAACATGAATTTTGAAAAGCTGGGCAAATGCATCATAATAAA
CAACAAGAACTTTGATAAAGTGACAGGTATGGGCGTTTCGAAACGGAACAGACAA
AGATGCCGAGGCGCTCTTCAAGTGCTTCCGAAGCCTGGGTTTTGACGTGATTGTC
20 TATAATGACTGCTCTTGTGCCAAGATGCAAGATCTGCTTAAAAAAGCTTCTGAAG
AGGACCATACAAATGCCGCTGCTTCGCTGCATCCTCTTAAGCCATGGAGAAGA
AAATGTAATTTATGGGAAAGATGGTGTACACCAATAAAGGATTTGACAGCCCA
CTTTAGGGGGGATAGATGCAAAACCCCTTTAGAGAAACCCAAACTCTCTTCATT
CAGGCTTGCCGAGGGACCGAGCTTGATGATGGCATCCAGGCCGACTCGGGGGCCC
25 ATCAATGACACAGATGCTAATCCTCGATACAAGATCCCAGTGGAAGCTGACTTCC
TCTTCGCCTATTCCACGGTTCAGGCTATTACTCGTGGAGGAGCCCAGGAAGAGG
CTCCTGGTTTGTGCAAGCCCTCTGCTCCATCCTGGAGGAGCACGGAAAAGACCTG
GAAATCATGCAGATCCTCACCAGGGTGAATGACAGAGTTGCCAGGCACCTTTGAG
TCTCAGTCTGATGACCCACACTTCCATGAGAAGAAGCAGATCCCCTGTGTGGTCT
30 CCATGCTACCAAGGAACCTCTACTTCAGTCAATAGCCATATCAGGGGTACATTCT
AGCTGAGAAGCAATGGGTCACTCATTAATGAATCACATTTTTTTATGCTCTTGAA
ATATTCAGAAATTCTCCAGGATTTTAATTTAGGAAAATGTATTGATTCAACAGG
GAAGAACTTTCTGGTGCTGTCTTTTGTCTCTGAATTTTCAGAGACTTTTTTTAT
AATGTTATTCATTTGGTGACTGTGTAACCTTCTCTTAAGATTAATTTTCTCTTTGTA
35 TGTCTGTTACCTTGTTAATAGACTTAATACATGCAACAGAAGTGACTTCTGGAGA
AAGCTCATGGCTGTGTCCACTGCAATTGGTGGTAACAGTGGTAGAGTCATGTGTG
CACTTGGCAAAAAGAATCCCAATGTTTGACAAAACACAGCCAAGGGGATATTTA
CTGCTCTTTATTGCAGAATGTGGGTATTGAGTGTGATTTGAATGATTTTTTCATTGG
CTTAGGGCAGATTTTCATGCAAAAAGTTCTCATATGAGTTAGAGGAGAAAAAGCTT
40 AATGATTCTGATATGTATCCATCAGGATCCAGTCTGGAAAACAGAAACCATTCTA
GGTGTTCACACAGAGGGAGTTTAATACAGGAAATTGACTTACATAGATGATAAA
AGAGAAGCCAAACAGCAAGAAGCTGTTACCACACCCAGGGCTATGAGGATAATG
GGAAGAGGTTTGGTTTCCTGTGTCCAGTAGTGGGATCATCCAGAGGAGCTGGAA
CCATGGTGGGGGCTGCCTAGTGGGAGTTAGGACCACCAATGGATTGTGGAAAAT
45 GGAGCCATGACAAGAACAAAACCACTGACTGAGATGGAGTGAGCTGAGACAGA
TAAGAGAATACCTTGGTCTCACCTATCCTGCCCTCACATCTTCCACCAGCACCTTA
CTGCCCAGGCCTATCTGGAAGCCACCTCACCAAGGACCTTGGAAGAGCAAGGGA
CAGTGAGGCAGGAGAAGAACAAGAAATGGATGTAAGCCTGGCCCATAATGTGA
ACATAAGTAATCACTAATGCTCAACAATTTATCCATTCAATCATTTATTATTGGG

TTGTCAGATAGTCTATGTATGTGTAAAACAATCTGTTTTGGCTTTATGTGCAAAAT
CTGTTATAGCTTTAAAATATATCTGGAACCTTTTAGATTATTCCAAGCCTTATTTT
GAGTAAATATTTGTTACTTTTAGTTCTATAAGTGAGGAAGAGTTTATGGCAAAGA
TTTTTGGCACTTTGTTTTCAAGATGGTGTATCTTTTGAATTCTTGATAAATGACT
5 GTTTTTTCTGCCTAATAGTAACTGGTTAAAAACAAATGTTTCATATTTATTGATT
AAAAATGTGGTTGCTTAATTCCT

SEQ ID NO: 427

>6121 BLOOD 138709.5 U40992 g6031211 Human heat shock protein hsp40 homolog

10 mRNA, complete cds. 0

GGAGGCTGTCTCCTGTGTAGTGTATATTTATCTGTAAGTGAGCCGTTGGGGAAGG
ATTGAATACAGAGACGCTGTCTGCTTGCTGCCTTAAGACAGCTAGCTGAATTGCT
GATTAACTTTTAAAATACCCAGCTTGGTTTATTTTTCTTAGAATCTGTTGCTAAGA
CTGGGGACGCTGTTTTCTTTACAAAGGGAAATCTAAGTTAATTTCAAGGCATTC
15 GAAATGGGGAAAGACTATTATTGCATTTTGGGAATTGAGAAAGGAGCTTCAGAT
GAAGATATTA AAAAGGCTTACCGAAAACAAGCCCTCAAATTTTCATCCGGACAAG
AACAAATCTCCTCAGGCAGAGGAAAAATTTAAAGAGGTCGCAGAAGCTTATGAA
GTATTGAGTGATCCTAAAAAGAGAGAAATATATGATCAGTTTGGGGAGGAAGGG
TTGAAAGGAGGAGCAGGAGGTACTGATGGACAAGGAGGTACCTTCCGGTACACC
20 TTTTCATGGCGATCCTCATGCTACATTTGCTGCATTTTTCGGAGGGTCCAACCCCTT
TGAAATTTTCTTTGGAAGACGAATGGGTGGTGGTAGAGATTCTGAAGAAATGGA
AATAGATGGTGATCCTTTTAGTGCTTTGGTTTCAGCATGAATGGATATCCAAGA
GACAGGAATTCTGTGGGGCCATCCCGCTGAAACAAGATCCTCCAGTTATTCATG
A ACTTAGAGTATCACTTGAAGAGATATATAGTGGTTGTACCAAACGGATGAAGA
25 TTTCTCGAAAAAGGCTAAACGCTGATGGAAGGAGTTACAGATCTGAGGACAAAA
TTCTTACCATTGAGATTA AAAAGGGTGGAAAGAAGGCACCAAAATTACTTTTCC
AAGAGAAGGAGATGAAACACCAAATAGTATTCCAGCAGACATTGTTTTTATCATT
AAAGACAAAGATCATCCAAAATTTAAAAGGGATGGATCAAATATAATTTATACT
GCTAAAATTAGTTTACGAGAGGCATTGTGTGGCTGCTCAATTAATGTACCAACAC
30 TGGATGGAAGAAACATACCTATGTCAGTAAATGATATTGTGAAACCCGGAATGA
GGAGAAGAATTATTGGATATGGGCTGCCATTTCCAAAAAATCCTGACCAACGTG
GTGACCTTCTAATAGAATTTGAGGTGTCCTTCCCAGATACTATATCTTCTTCATCC
AAAGAAGTACTTAGGAAACATCTTCTGCCTCATAGAATGAAGAAGCTTTGTTACA
CATATTTTGATAAGGCACTGAAAATATAAAAGGACTGGTAGTTTACTGATGTAGA
35 TGTGAATTCTGTATAAAGATGTGTAAATTCTTTTGAGGGTTCATTAAATTGCATG
AATAGAGACGGGTCAAATAAATAGGCAAAAGGGATTTTACAGTTAGAGATAAAA
AGAGAAAACCATTCAGTATTTTATTTTCAATTTCTCCTGATTGAGATATTTTLAGT
AATTTGCTTATATGTAAAAGTTGTTTTTGTGGAGTCAGTGGATATATTTCTAATGA
AGTGCTAGACTATCCAATTACTTAATTTCTTATACCTTTAGATAATCAGTATGAAA
40 AGTTCCCATTTATAATGGAAATGAAAATTCTTAATACTAACTATACATGTAATATG
TATTTCTAGAAGAGAATAAAAACCCAAGTCAGTTATTAGATTTAAATCACCTTCT
GAAATGCTGCTATAGGGCTGGTATCTGTAAAAGAATATCCTGATGCATCTGTTTC
ACCATTTTGATTTTTTAAAGTATGCTGTAGCATTCTTAATAACATCGTTGTGATGT
TCTTAAGGCAGATCTTTCTTCATAAAAAGGAAAGTAATGGCAATTTCTCTCCTGT
45 GGAAATCCCAATTGCTTGAATTACTGATATTTTAGAATAGACTTTTTAAATGCC
ATATGTAATTTTATGCAAGTTGACTATATATCTTGTACTTAATAAATTATAGGCTC
ATTTTGTTCTCTGCTAGTTTAAAGTAATTCGTTTAATAATAGATGTGTTTTTAGAG
GAAATGCTGTTACTTGAATTAATTTTCCAGTTATACAGTCTTCTATAACTTACTA
ATAATATTCTATATGTACTTTATGTAATTTCCCTAAAAAGAATGAACTACCACTA

CACTATGGTGTAAACCAAAATATAGGGAAAATAAACACTAACTGCTGCTTATG
GATAATGTTGCAACTACTTGTATGCATATAAATATTTTACTTTTTCACATGTATA
GATTGCATTTCTTAGGTGTTTTAATTTTTTAAATATATTTATGTTTTAAAAATTTAG
TTTTGTTTTCTGTTTTATAACTATAGTGAGAATGATGTTTTGAAGCAAAATTTTTG
5 GTTATAAAATAGTTTTTCAGGATTATATATATATACTGGATCCTATCGCCTTTTA
GTAGAATATGAAATATTCTTTTAGAAATCCAATATAAATAGGTTATAATAGCCAT
ATTCTTTATTACTTTATTGAGATATAATTTACATGCCATAAAGTTTACCCTTAAAA
TAGATAATTGAGTGGTTTTTAGTGATATTTACAAAGTGGTACAATCATCATCACTT
TCTAATTCCAGAATATT

10

SEQ ID NO: 428

>6133 BLOOD 474194.5 M88279 g186389 Human immunophilin (FKBP52) mRNA,
complete cds. 0

15 GCCGCGTGCGAGAGGTGCTCAAGCCTCCTGCGCGGTCCGCAGTCAGTGCCGCCGC
GCCCGGCCTCCCGCACGCCCCGCAGGTAGCGCCCCCGCCGCGGCCAGAGTGC
GCTCGCGCCGGCACCAGCTCCCGGATAAACGGCGCGCCGCGCGGAGATGACAGC
CGAGGAGATGAAGGCGACCGAGAGCGGGGCGCAGTCGGCGCCGCTGCCCATGG
AGGGAGTGGACATCAGCCCCAAACAGGACGAAGGCGTGCTGAAGGTCATCAAG
AGAGAGGGCACAGGTACAGAGATGCCCATGATTGGGGACCGAGTCTTTATCCAC
20 TACACTGGCTGGGCTATTAGATGGCACAAAGTTTGACTCCAGTCTGGATCGCAAG
GACAAATTCTCCTTTGACCTGGGAAAAGGGGAGGTCATCAAGGCTTGGGACATT
GCCATAGCCACCATGAAGGTGGGGGAGGTGTGCCACATCACCTGCAAACCAGAA
TATGCCTACGGTTCAGCAGGCAGTCTCCAAAGATTCCCCCAATGCCACGCTTG
TATTTGAGGTGGAGTTGTTTGAGTTTAAGGGAGAAGATCTGACGGAAGAGGAAG
25 ATGGCGGAATCATTCGCAGAATACAGACTCGCGGTGAAGGCTATGCTAAGCCCA
ATGAGGGTGCTATCGTGGAGGTTGCACTGGAAGGGTACTACAAGGACAAGCTCT
TTGACCAGCGGGAGCTCCGCTTTGAGATTGGCGAGGGGGAGAACCTGGATCTGC
CTTATGGTCTGGAGAGGGCCATTCAGCGCATGGAGAAAGGAGAACATTCCATCG
TGTACCTCAAGCCCAGCTATGCTTTTGGCAGTGTTGGGAAGGAAAAGTTCCAAAT
30 CCCACCAAATGCTGAGCTGAAATATGAATTACACCTCAAGAGTTTTGAAAAGGC
CAAGGAGTCTTGGGAGATGAATTCAGAAGAGAAGCTGGAACAGAGCACCATAGT
GAAAGAGCGGGGCACTGTGTACTTCAAGGAAGGTAAATACAAGCAAGCTTTACT
ACAGTATAAGAAGATCGTGTCTTGGCTGGAATATGAGTCTAGTTTTTCCAATGAG
GAAGCACAGAAAGCACAGGCCCTTCGACTGGCCTCTCACCTCAACCTGGCCATGT
35 GTCATCTGAAACTACAGGCCTTCTCTGCTGCCATTGAAAGCTGTAACAAGGCCCT
AGAACTGGACAGCAACAACGAGAAGGGCCTCTTCCGCGGGGAGAGGCCACCT
GGCCGTGAATGACTTTGAACTGGCACGGGCTGATTTCCAGAAGGTCCTGCAGCTC
TACCCCAACAACAAAGCCGCCAAGACCCAGCTGGCTGTGTGCCAGCAGCGGATC
CGAAGGCAGCTTGCCCGGGAGAAGAAGCTCTATGCCAATATGTTTGAGAGGCTG
40 GCTGAGGAGGAGAACAAAGGCCAAGGCAGAGGCTTCCTCAGGAGACCATCCCACT
GACACAGAGATGAAGGAGGAGCAGAAGAGCAACACGGCAGGGAGCCAGTCTCA
GGTGGAGACAGAAGCATAGCCCCTCTCCACCAGCCCTACTCCTGCGGCTGCCTGC
CCCCCAGTCTCCCCACTCCACCCTGTTAGTTTTGTAAAAACTGAAGAATTTTGAGT
GAATTAGACCTTTATTTTTCTATCTGGTTGGATGGTGGCTTTAGGGGAAGGGGGA
45 AAGGTGTAGGCTGGGGGATTGAGGTGGGGAATCATTTTAGCTGGTGTGAGCCCT
CTTCCCTTCCTCCATTGCACATGAACATATGTCCATCCATATATATTCATCAGAAT
GTTAATTTATTTTGCTCCCTCTGTTAGGTCCATTTTCTAAGGGTAGAAGAGGCAAG
TGGTAGGGATGAGGTCTGATAAGAACCCAGGGTGGAGAGGGAGACTCCTGGGCA
GCCGTTTTCTCATCCTTTCCCTCTCCAGTCCATTTCCAAATGTGGCCTCCATGT

GGGTGCTAGGGACATGGGAAAAACCACTGCTATGCCATTTCTTCTCTCTGTTCCC
TTCTTCACCCCCGACGGTGTGGCTGATGATGTCTTCTGGTGTGTCATGGTGACCACC
CCCTGTTCCCTGTTCTGGTATTTCCCCTGTCAGTTTCCCCTCTCGGCCAGGTTGTGT
CCCAAAATCCCCTCAGCCTCTTCTCTGCACGTTGCTGAAGGTCCAGGCTTGCCTC
5 AAGTTCCATGCTTGAGCAATAAAGTGGAAACAATAAAACCTGGGTGTCAGACAA
CCCTTTCTGTT

SEQ ID NO: 429

>6157 BLOOD Hs.1613 gnl|UG|Hs#S4015 H.sapiens mRNA for A2a adenosine receptor

/cds=(893,2131) /gb=X68486 /gi=400451 /ug=Hs.1613 /len=2988

10 CATCACCTTTTTTTAAGTAGTAAGAATAAAGCCACTGTATGATTCTCTTAATAGCT
ATACATTAATCCTGTTTTTAGTGCTGACTGGGCCAGCCTTCCGGGAAGTGGAGTC
TGTCTCTTTCAGTGCTTTTTTGTGTTTTTGTGTTTTTTCGAGACGGGGTCGATCAC
GGCTCACCACAGCCTTAACCTCCAGGGCTCCAGCAATCCTCCCACCTCAGCCTCC
15 TGAGTAGCTGGGACCACAGGTGTGTGCCACCATCTCCAGCAGTTTGTTTATTTAT
TTTTTCTTTTTTTTTTTTTTGGTAGAAATGGGCTTTTCGCCCATGTTGCCCAAGCTGG
TCTTGCACTTCTGGGCTGAAGCAATCCTCTCGCCTTGGCCTCCCAGAGCCTTGGG
ATTACAGAATCATGGGTGAGAGCTGGCATGGCCCCTAGAGGTCATTTGGGGTCC
AGCTGCCTCACCGTATCAATGAGGAACTGAGGCCAGAAAAGAAAAGCATT
20 TGCCCAGAGTCCCTCAGAAAAAACAGACCACATCTGATCCTTGGCCCTGAGTCC
AGAGTGGGAGGCACCGTGACAACAATGCGCAGAGCAGGGAATGCAGGGAGCCA
TGGATAGTGCTGGGGTGCCTCAGGAACCCCTGAAGCTGGGCTGAGCCATGATGCT
GCTGCCAGAACCCCTGCAGAGGGCCTGGTTTCAGGAGACTCAGAGTCTCTGTGA
AAAAGCCCTTGGAGAGCGCCAGCAGGGCTGCACTTGGCTCCTGTGAGGAAGG
25 GGCTCAGGGGTCTGGGCCCTCCGCCTGGGCCGGGCTGGGAGCCAGGCGGGCGG
CTGGGCTGCAGCAATGGACCGTGAGCTGGCCCAGCCCGCGTCCGTGCTGAGCCT
GCCTGTGCTGTGTGGCATGCCCATCATGGGCTCCTCGGTGTACATCACGGTGGAG
CTGGCCATTGCTGTGCTGGCCATCCTGGGCAATGTGCTGGTGTGCTGGGCCGTGT
GGCTCAACAGCAACCTGCAGAACGTCACCAACTACTTTGTGGTGTCACTGGCGGC
30 GGCCGACATCGCAGTGGGTGTGCTCGCCATCCCCTTTGCCATCACCATCAGCACC
GGGTTCTGCGCTGCCTGCCACGGCTGCCTCTTCATTGCCTGCTTCGTCTGTCCT
CACGCAGAGCTCCATCTTCAGTCTCCTGGCCATCGCCATTGACCGCTACATTGCC
ATCCGCATCCCGCTCCGGTACAATGGCTTGGTGACCGGCACGAGGGCTAAGGGC
ATCATTGCCATCTGCTGGGTGCTGTCGTTTGCCATCGGCCTGACTCCCATGCTAGG
35 TTGGAACAACCTGCGGTCAGCCAAAGGAGGGCAAGAACCACTCCCAGGGCTGCGG
GGAGGGCCAAGTGGCCTGTCTCTTTGAGGATGTGGTCCCCATGAACTACATGGTG
TACTTCAACTTCTTTGCCTGTGTGCTGGTGCCCCTGCTGCTCATGCTGGGTGTCTA
TTTGCGGATCTTCCTGGCGGCGCGACGACAGCTGAAGCAGATGGAGAGCCAGCC
TCTGCCGGGGGAGCGGGCACGGTCCACACTGCAGAAGGAGGTCCATGCTGCCAA
40 GTCATGGCCATCATTGTGGGGCTCTTTGCCCTCTGCTGGCTGCCCTACACATCA
TCAACTGCTTCACTTTCTTCTGCCCCGACTGCAGCCACGCCCCCTCTCTGGCTCATG
TACCTGGCCATCGTCTCTCCCACACCAATTTCGGTTGTGAATCCCTTCATCTACGC
CTACCGTATCCGCGAGTTCGCGCAGACCTTCCGCAAGATCATTTCGAGCCACGTC
CTGAGGCAGCAAGAACCCTTTCAAGGCAGCTGGCACCAGTGCCCGGGTCTTGGCA
45 GCTCATGGCAGTGACGGAGAGCAGGTCAGCCTCCGTCTCAACGGGCCACCCGCCA
GGAGTGTGGGCCAACGGCAGTGCTCCCCACCCTGAGCGGAGGCCCAATGGCTAT
GCCCTGGGGCTGGTGAGTGGAGGGAGTGCCCAAGAGTCCCAGGGGAACACGGGC
CTCCAGACGTGGAGCTCCTTAGCCATGAGCTCAAGGGAGTGTGCCAGAGCCC
CCTGGCCTAGATGACCCCTGGCCCAGGATGGAGCAGGAGTGTCTGATGATTCA

TGGAGTTTGCCCCTTCCTAAGGGAAGGAGATCTTTATCTTTCTGGTTGGCTTGACC
 AGTCACGTTGGGAGAAGAGAGAGAGTGCCAGGAGACCCTGAGGGGACGCCGTTTC
 CTACTTTGGACTGAGAGAAGGGAGCCCCAGGCTGGAGCAGCATGAGGCCAGCA
 AGAAGGGCTTGGGTTCTGAGGAAGCAGATGTTTCATGCTGTGAGGCCTTGACCA
 5 GGTGGGGGCCACAGCACCAGCAGCAGCATCTTTCTGGGCAGGCCAGCCCTCCA
 CTGCAGAAGCATCTGGAAGCACCACTTGTCTCCACAGAGCAGCTTGGGCACAG
 CAGACTGGCCTGGCCCTGAGACTGGGGAGTGGCTCCAACAGCCTCCTGCCACCC
 ACACACCACTCTCCCTAGACTCTCCTAGGGTTTACAGGAGCTGCTGGGCCCAGAGGT
 GACATTTGACTTTTTTCCAGGAAAAATGTAAGTGTGAGGAAACCCCTTTTATTTT
 10 ATTACCTTTCACTCTCTGGCTGCTGGGTCTGCCGTCGGTCCTGCTGCTAACCTGGC
 AGCAGAGCCTCTGCCCCGGGGAGCCTCAGGCAGTCCTCTCCTGCTGTACAGCTGC
 CATCCACTTCTCAGTCCCAGGGCCATCTCTTGGAGTGACAAAGCTGGGATCAAGG
 ACAGGGAGTTGTAACAGAGCAGTGCCAGAGCATGGGCCCAGGTCCCAGGGGAG
 AGGTTGGGGCTGGCAGGCCACTGGCATGTGCTGAGTAGCGCAGAGCTACCCAGT
 15 GAGAGGCCTTGTCTAACTGCCTTTCCTTCTAAAGGGAATGTTTTTTTCTGAGATAA
 AATAAAAACGAGCCACATCGTGTTTAAAG

SEQ ID NO: 430

>6176 BLOOD 480902.3 X83860 g633213 Human mRNA for prostaglandin E receptor (EP3c). 0

20 ACCAGAGGTTTCCCAGAGAGGAAGGCGTGGCTCCCTCCCGGGCCAGTGAGCCCT
 GGGCGCCGCGCGCGCGCGGTCCCAGCAGCGGAGTAGGGCGGGCGGCTGGGGCGCG
 CACCATGGGGGGGAGGCCAGCCCCAGCGCGGTAAACGCCGACCTCCGCGGCGCG
 CCGCGCGCGCTGTGCCCCCTCCCGGTGGGGCTCTCTGGACGCCATCCCTCCTCAG
 25 CTCGAAGCCAACATGAAGGAGACCCGGGGCTACGGAGGGGATGCCCCCTTCTGC
 ACCCGCCTCAACCACTCCTACACAGGCATGTGGGCGCCCGAGCGTTCGCGCGAG
 GCGCGGGGCAACCTCACGCGCCCTCCAGGGTCTGGCGAGGATTGCGGATCGGTG
 TCCGTGGCCTTCCCGATCACCATGCTGCTCACTGGTTTCGTGGGCAACGCACTGG
 CCATGCTGCTCGTGTGCGCGAGCTACCGGCGCCGGGAGAGCAAGCGCAAGAAGT
 30 CCTTCTGCTGTGCATCGGCTGGCTGGCGCTCACCGACCTGGTCGGGCAGCTTCT
 CACCACCCCGGTGCTCATCGTGTGTACCTGTCCAAGCAGCGTTGGGAGCACATC
 GACCCGTCGGGGCGGCTCTGCACCTTTTTCGGGCTGACCATGACTGTTTTCGGGC
 TCTCCTCGTTGTTTCATCGCCAGCGCCATGGCCGTCGAGCGGGCGCTGGCCATCAG
 GCGCGCGCACTGGTATGCGAGCCACATGAAGACGCGTGCCACCCGCGCTGTGCT
 35 GCTCGGCGTGTGGCTGGCCGTGCTCGCCTTCGCCCTGCTGCCGGTGTGGGCGTG
 GGCCAGTACACCGTCCAGTGGCCCGGACGTGGTGCTTCATCAGCACCGGGCGA
 GGGGGCAACGGGACTAGCTCTTCGCATAACTGGGGCAACCTTTTCTTCGCCTCTG
 CCTTTGCCTTCTGGGGCTCTTGGCGCTGACAGTCACCTTTTCCTGCAACCTGGCC
 ACCATTAAGGCCCTGGTGTCCCGCTGCCGGGCCAAGGCCACGGCATCTCAGTCCA
 40 GTGCCAGTGGGGCCGCATCACGACCGAGACGGCCATTGAGCTTATGGGGATCA
 TGTGCGTGCTGTGCGGTCTGCTGGTCTCCGCTCCTGATAATGATGTTGAAAATGAT
 CTTCAATCAGACATCAGTTGAGCACTGCAAGACACACACGGAGAAGCAGAAAGA
 ATGCAACTTCTTCTTAATAGCTGTTTCGCCTGGCTTCACTGAACCAGATCTTGGATC
 CTTGGGTTTACCTGCTGTAAAGAAAGATCCTTCTTCGAAAGTTTTGCCAGGTAGC
 45 AAATGCTGTCTCCAGCTGCTCTAATGATGGACAGAAAGGGCAGCCTATCTCATT
 TCTAATGAAATAATACAGACAGAAGCATGAAAGAAAACACTTAACCTGCATGTG
 CACAGCTTTTGGTAACAAATATCGCTAAACCTTACTGTGAATTTAGGCATCTCTG
 GCATGCCACTGTTTATGCATTGAAGTGAATTTTTGGTATAAAGCTAAATGGTCT
 TAGAAGCATAGAAAATCCCTATGTGCCAAAAGTAGTGAAACACAAACAAAGGAA

AATATATTAATAACAGTCTAGTGTTTTTGTGAGTCTGCCATTCGTAGCTGAATAT
GTGATTAATTATGTGATGAAAACATTTTTTATAAATGATCTTGGTCTATTGGGGA
GCGGGGATAGTTAATATTCCAGTACACTGAATACATGAGGAATTTAACCACATAC
ATCATTGAAGACAAGGGATAGCAGTTTGTTTTTATTCAAAGACATTGCTGTGTTT
5 TCTTTCATTGCCTCTCTCGCTTTCTGTCACTTTTTTCTCCTTACATTAAAGAAAAG
TTTAATTACAGTTAAAAATGTATAATGTATTTATAAATTCATCGATAACCATTATT
CAAATATTGCTCAATACAGCAAATTAGCTCCTAACCTAACAAAGTTTAAAGTTTAC
TTGGATTGATAATTAGGTTTACTCTTTATCTGAATAAGAACCAATTCCATTTGTTT
GAAATATGGAGTTTGTGACTACCCAAATTGCTAATTATTCTTTCTTTTGAATATAT
10 TTTACATTTCTATGAGCCTAAGGAAGATTCATGAAACTGACCTATGAGAGTCGTG
AAGTGGTTTTTCAGAATGCTATGTAAGGACCGATTGAGCACTAACTATAGGTAC
TCTGAATATATATTTCCCTTGATTATTCACCAAAGGTGTTCCCCAGTCTTTGACTC
TTTAAATTCCAATACTGATTCCAAAACAAATAAATATTTTGAAGACTCAATGAAT
ACTTTCATATTTTGGCCTATTTATATAAGAAAGTTAATAACATTGACCCTTCACA
15 GCTCTTCTGCCTGCTCCTCAAAGTGGCTCTATCTAAATATTTATTACTAAAATGTT
TTTCCTACAGTCTACATGAATACAAACCTCAATAGCTAAGCTTGACGTATTTGTG
CACAAGTAGATCACTACATTAAGTTTTGGGAATTGCACTTCTTAAAAATGTCTCC
CCACCAAACATAGTAATCCTGTAGTTATGCCTACACAAAGCTTGCCATATTCTTT
GGTCGATTCATTTTGTAAACCCATTAACTTTTTATTGTGAAGATTTTCATTTGCAG
20 TTTCTTGCACTGCTTTTCTAGTTTTTTAAAAGCTTGAGATTTATTTATACTTCTTGT
AGTAACTGCATATTTCTGTGTGTGTTTAGTGGTAAAGAATTAATTTTGATAGGTA
GAATATGTCTATCAGATTGATATATAGACCAGCCTATGTCAATTGGGGCTAATTA
TTTTAAATGACCATGTCAAATTGAATTTGGAGACAAAATCTGTTGAGAGTGCTTA
TTGTAATTAATGATGGTTCTACTAACTAAATTTTGGAAAAGGTGATAAATAGACTA
25 TACTAAAATCTCTCTATGCCATAGAATTGGATTATCCTGTAGGTCATCTCATTGGG
TCTAAGACAAAACCTACTTTTTTTCAAAGGTGCACTGAAATCACATAATAAA
GAGGCTTTACCTCTTGGTTGGTCCTGTGACCCTAAGTTCTAGTCAGATAGACACA
GAGGCAATGTGAATTTGAGTGGCATGAGCATGATTAGGTTATTCCTTCCAGCATC
TAGTATAGCACCTGGAATATAGAACTGTCTAATACATATTTATTCAGTGAATCA
30 ATGAGCAGAAGTTTGCCAGGACAGTACACATTGGCAAGGCACATACCATATGAT
TGAAGTGCTTCATGCCATTACAGTCCATCAGGCTGATAAAGTGAATTATTTCTGA
TTATTTAATTACAGAAATATGAATTTATCTTCAAGGGGTTAGTGTCACTACTGCTGT
ACAACACAGTGCTTTATTTATACTAATAATTTAGGAGACTGATACTTCCAAATGA
TAGTGGACATTACTATCANAAAGAAATCACTTTTCATCAAACCTGCAAAAATACAG
35 AAAGGCCAAAAACCTGACACTTATTCTTAACTGCAAATTAATTCCTGCCCAGGG
GATATATTTTAGGTGGGGATGAATGGCAGCTTTTGTGTTTTTTTTTAAACAAGCTTGA
AAGGGAGGTGGAAAACAAAGAAATTATGTAAATGGCATATGAGTTTTATTATCT
AGGCATTCGTTAGTATGGGGAAACCTGCATAAGCAACTGAAAATCCCAAATGAT
TTCAGCCTTTTCATGATGGTTGAGGTTAGATTTTACAGAGATGTACAGAGACTAGAG
40 CGGTGGTTAGAAAGAGGATATATGTAGTCACAGCAGAAAGACGTGTCTAAGTTT
AATTTTATTGGCTTTCAAGTTCACTCATGTATACTTAGTTTGTCCATACATATGTC
TAATCAGGAAAAATGCATGTATAGATTATGACAATTCCTGAATTTTGAAGTATTG
GTAAAAGACAATTAAGGCCAAGAAAACCATGGTGGAAGAAGTAAGCGAATG
AAATGTAGAAATATATGTAAAATTAGCAAGTGTCAATTTTACCAAGTAGTGTTGA
45 TTTTCCAAACAATGAATTTATATACTATGCTGAGTCACAGAGAAGAATGATCACA
TGTTACTTAATGAGAGCAGTTTACTTTTCAAATAAAATAGGTATGATGAATGTCT
TAAAAATATCTTGAAGTTGAAGAAACAAAATGAGTTATCTCAATATTTACCAAG
TTAACCTAGTGCTGTATATATCCCAAGATATTTTAGGTAAATGTAAGTGTTTAATC
ATGCCAGATTTAAACTAGTCTGAAATATAGGGTATACATATATTTCTACTTACAT

TTCTTTATTTTATGAAATATCCGACCATGTTGCAGAAAATAATGCAAAACCTCAT
 GTAAGTTAACTATGAAAGATCCTGTGAGCACATTGGCATTGAGTGACAGACAAA
 CTA AAAA ACTGGCAAACAGTATTTTAATAAGGGGGTCACTCTGTGGCAGTATTCTA
 ATATTGGATTTTCAAGTAGATTAGGCTTTTTATTTATTCAACGCTTTTTATAATTTT
 5 GTTCTTTTTGACTCCAAATTATTGGTCAGCTTTCAACCTTCTCCACATCAGCAATC
 ACTAATAGTTCTTTTGGTTGAGATCAACTCAGAA

SEQ ID NO: 431

>6204 BLOOD 350550.3 S74902 g984506 Human P2U nucleotide receptor mRNA,

complete cds. 0

GGGGAACAGCGCAGGGAGGTGGGTAGCCGGGCTCCAGGCACGTGGGTCTCTGC
 GGCTGCGGCGGGACCCGGGCACTGGCACCCGGGAGCGGGCGGACGGCACCCCG
 AGAGGAGAAGCGCAGCGCAGTGGCGAGAGGAGCCCCTTGTGGCAGCAGCACTA
 CCTGCCCAGAAAAATGCTGGAGGCTGGGCGTGGCCCCAGGCCTGGGGACCTGTT
 15 TTTCTGTTTCCCGCAGAGTTCCCTGCAGCCCGGTCCAGGTCCAGGCGTGTGCATT
 CATGAGTGAGGAACCCGTGCAGGCGCTGAGCATCCTGACCTGGAGAGCAGGGGC
 TGGTCAGGGCGATGGCAGCAGACCTGGGCCCCCTGGAATGACACCATCAATGGCA
 CCTGGGATGGGGATGAGCTGGGCTACAGGTGCCGCTTCAACGAGGACTTCAAGT
 ACGTGCTGCTGCCTGTGTCTACGGCGTGGTGTGCGTGCTTGGGCTGTGTCTGAA
 20 CGCCGTGGCGCTCTACATCTTCTTGTGCCGCTCAAGACCTGGAATGCGTCCACC
 ACATATATGTTCCACCTGGCTGTGTCTGATGCACTGTATGCGGCCTCCCTGCCGCT
 GCTGGTCTATTACTAAGCCCGCGGGCGACCACTGGCCCTTCAGCACGGTGCTCTGC
 TAGCTGGTGCGCTTCTCTTCTACACCAACCTTACTGCAGCATGCTCTCTCTCAG
 TCTGGCATCAGCGTGCACCGGTGTCTGGGCGTCTTACGACCTCTGCGCTCCCTGCGC
 25 GTGGGGCCGGGCCCCGCTACGCTCGCCGGGTGGCCGGGGCCGTGTGGGTGTTGGTG
 CTGGCCTGCCAGGCCCCCGTGCTCTACTTTGTCAACCACGCGCGCGGGGGCC
 GCGTAACCTGCCACGACACCTCGGCACCCGAGCTCTTCAGCCGCTTCGTGGCCTA
 CAGCTCAGTCATGCTGGGCCTGCTCTTCGCGGTGCCCTTTGCCGTCATCCTTGTCT
 GTTACGTGCTCATGGCTCGGCGACTGCTAAAGCCAGCCTACGGGACCTCGGGCG
 30 GCCTGCCTAGGGCCAAGCGCAAGTCCGTGCGCACCATCGCCGTGGTGCTGGCTGT
 CTTGCCCCCTCTGCTTCCCTGCCATTCCACGTACCCGCAACCCTCTACTACTCCTTCC
 GCTCGCTGGACCTCAGCTGCCACACCCTCAACGCCATCAACATGGCCTACAAGGT
 TACCCGGCCGCTGGCCAGTGCTAACAGTTGCCTTGACCCCGTGCTCTACTTCTTG
 GCTGGGCAGAGGCTCGTACGCTTTGCCCAGATGCCAAGCCACCCACTGGGCCC
 35 CAGCCCTGCCACCCCGGCTCGCCGCAGGCTGGGCCTGCGCAGATCCGACAGAAC
 TGACATGCAGAGGATAGAAGATGTGTTGGGCAGCAGTGAGGACTCTAGGCGGAC
 AGAGTCCACGCCGGCTGGTAGCGAGAACAATAAGGACATTTCGGCTGTAGGAGCA
 GAACACTTCAGCCTGTGCAGGTTTATATTGGGAAGCTGTAGAGGACCAGGACTTG
 TGCAGACGCCACAGTCTCCCCAGATATGGACCATCAGTGACTCATGCTGGATGAC
 40 CCCATGCTCCGTCAATTTGACAGGGGCTCAGGATATTCACTCTGTGGTCCAGAGTC
 AACTGTTCCCATAAACCCCTAGTCATCGTTTGTGTGTATAAGTTGGGGGAATTAAG
 TTTCAAGAAAGGCAAGAGCTCAAGGTCAATGACACCCCTGGCCTGACTCCCATG
 CAAGTAGCTGGCTGTACTGCCAAGGTACCTAGGTTGGAGTCCAGCCTAATCAAGT
 CAAATGGAGAAACAGGCCCAGAGAGGAAGGTGGCTTACCAAGATCACATACCA
 45 GAGTCTGGAGCTGAGCTACCTGGGGTGGGGGCCAAGTCACAGGTTGGCCAGAAA
 ACCCTGGTAAGTAATGAGGGCTGAGTTTGCACAGTGGTCTGGAATGGACTGGGT
 GCCACGGTGGACTTAGCTCTGAGGAGTACCCCAAGAGATGAACATCTG
 GGGACTAATATCATAGACCCATCTGGAGGCTCCCATGGGCTAGGAGCCAGTGTG
 AGGCTGTAACCTATACTAAAGGTTGTGTTGCCTGCTGAAAAAAA

>6217 BLOOD gi|535478|gb|U12512.1|HSU12512 Human bradykinin receptor B1 subtype mRNA, complete cds

25

>6227 BLOOD gi|182389|gb|M57285.1|HUMFACX Human coagulation factor X (F10)
mRNA, complete cds

30

35

40

45

CTGGAGGTGCCCTACGTGGACCGCAACAGCTGCAAGCTGTCCAGCAGCTTCATCA
TCACCCAGAACATGTTCTGTGCCGGCTACGACACCAAGCAGGAGGATGCCTGCC
AGGGGGACAGCGGGGGCCCCGCACGTACCCCGCTTCAAGGACACCTACTTCGTGA
CAGGCATCGTCAGCTGGGGAGAGGGCTGTGCCCCGTAAGGGGAAGTACGGGATCT
5 ACACCAAGGTCACCGCCTTCTCTCAAGTGGATCGACAGGTCCATGAAAACCAGGG
GCTTGCCCAAGGCCAAGAGCCATGCCCCGGAGGTCATAACGTCCTCTCCATTAAA
GTGAGATCCCCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 434

10 >6233 BLOOD 988660.1 L33930 g500848 Human CD24 signal transducer mRNA, complete
cds and 3' region. 0

CCTTTCCTCTGCGGCGGGCCGAGAGATAACCCTGCCCCGAGGGGTCCCGGGCGCCCCG
CCCCCACGCGGTTCGCACTGGAATTCGCAGCCCCCTCTCGGGTCCCGGGGGCGCAT
TTTGCACTCTGAGTGGCAATGCACTTGCTCCAGGACAGGCGGCTACCCCGCCGCA
15 GCGAGGCGCGGACTTTTCTTTTGGGGGGTTTCGCCGGCTCGCCGCGCTCCCCACCT
TGCCTGCGCCCCGCCGGAGCCAGCGGTTCTCCAAGCACCCAGCATCCTGCTAGAC
GCGCCGCGCACCGACGGAGGGGACATGGGCAGAGCAATGGTGGCCAGGCTCGG
GCTGGGGGCTGGCTGCTGCTGGCACTGCTCCTACCCACGCAGATTTATTCCAGTGA
AACAACAACCTGGAACCTTCAAGTAACTCCTCCCAGAGTACTTCCAACCTCTGGGTTG
20 GCCCCAAATCCAACCTAATGCCACCACCAAGGCGGCTGGTGGTGGCCTGCAGTCA
ACAGCCAGTCTCTTCGTGGTCTCACTCTCTCTTCTGCATCTCTACTCTTAAGAGAC
TCAGGCCAAGAAACGTCTTCTAAATTTCCCCATCTTCTAAACCCCAATCCAAATGG
CGTCTGGAAGTCCAATGTGGCAAGGAAACACAGGTCTTCATCGAATCTACTAATT
CCACACCTTTTATTGACACAGAAATGTTGAGAATCCCAAATTTGATTGATTGA
25 AGAACATGTGAGAGGTTTGAAGTAGATGATGGATGCCAATATTAAATCTGCTGGA
GTTTCATGTACAAGATGAAGGAGAGGCAACATCCAAAATAGTTAAGACATGATT
TCCTTGAATGTGGCTTGAGAAATATGGACACTTAATACTACCTTGAAAATAAGAA
TAGAAATAAAGGATGGGATTGTGGAATGGAGATTGAGTTTTCATTTGGTTCATTA
ATTCTATAAGGCCATAAAACAGGTAATATAAAAAGCTTCCATGATTCTATTTATA
30 TGTACATGAGAAGGAACTTCCAGGTGTTACTGTAATTCCTCAACGTATTGTTTCG
ACAGCACTAATTTAATGCCGATATACTCTAGATGAAGTTTTACATTGTTGAGCTA
TTGCTGTTCTCTTGGGAACTGAACTCACTTTCCTCCTGAGGCTTTGGATTGACAT
TGCATTTGACCTTTTATGTAGTAATTGACATGTGCCAGGGCAATGATGAATGAGA
ATCTACCCCCAGATCCAAGCATCCTGAGCAACTCTTGATTATCCATATTGAGTCA
35 AATGGTAGGCATTTCTATCACCTGTTTCCATTCAACAAGAGCACTACATTCATTT
AGCTAAACGGATTCCAAAGAGTAGAATTGCATTGACCACGACTAATTTCAAANN
NN
NN
NN
40 NNN
NN
NN
NNNTATTTCTGCATATGTTTGAATACTTTTACAATTTAAAAAATGATCTGTTT
TGAAGGCAAAATTGCAAATCTTGAAATTAAGAAGGCAAAATGTAAAGGAGTCAA
45 ACTATAAATCAAGTATTTGGGAAGTGAAGACTGGAAGCTAATTTGCATAAATTCA
CAAACCTTTTATACTCTTTCTGTATATACATTTTTTTTCTTTAAAAAACAACCTATGG
ATCAGAATAGCAACATTTAGAACACTTTTTGTTATCAGTCAATATTTTATAGATAGT
TAGAACCTGGTCTTAAGCCTAAAAGTGGGCTTGATTCTGCAGTAAATCTTTTACA
ACTGCCTCGACACACATAAACCTTTTTTAAAAATAGACACTCCCCGAAGTCTTTTG

TTCGCATGGTCACACACTGATGCTTAGATGTTCCAGTAATCTAATATGGCCACAG
TAGTCTTGATTACCAAAGTCCTTTTTTCCATCTTTAGAAAACCTACATGGGAACAA
ACAGATCGAACAGTTTTGAAGCTACTGTGTGTGTGAATGAACACTCTTGCTTTAT
TCCAGAATGCTGTACATCTATTTTGGATTGTATATTGTGTTTGTGTATTTACGCTT
5 TGATTCATAGTAACTTCTTATGGAATTGATTTGCATTGAACACAACTGTAAATA
AAAAGAAATGGCTGAAAGAGCAA

SEQ ID NO: 435

>6245 BLOOD 222810.1 M33537 g182662 Human N-formylpeptide receptor (fMLP-R98)

10 mRNA, complete cds. 0

GTCACTCTCCCCAGGAGACCCAGACCTAGAACTACCCAGAGCAAGACCACAGCT
GGTGAACAGTCCAGGAGCAGACAAGATGGAGACAAATTCCTCTCTCCCCACGAA
CACCTCTGGAGGGACACCTGCTGTATCTGCTGGCTATCTCTTCTGGATATCATCA
CTTATCTGGTATTTGCAGTCACCTTTGTCTCGGGGTCTGGGCAACGGGCTTG
15 ATCTGGGTGGCTGGATTCCGGATGACACACACAGTCACCACCATCAGTTACCTGA
ACCTGGCCGTGGCTGACTTCTGTTTCACCTCCACTTTGCCATTCTTCATGGTCAGG
AAGGCCATGGGAGGACATTGGCCTTTCGGCTGGTTCCTGTGCAAATTCCTCTTTA
CCATAGTGGACATCAACTTGTTTCGGGAAGTGTCTTCTGATCGCCCTCATTGCTCT
GGACCGCTGTGTTTGCCTGCTGATCCAGTCTGGACCCAGAACCACCGCACCGTG
20 AGCCTGGCCAAGAAGGTGATCATTGGGCCCTGGGTGATGGCTCTGCTCCTCACAT
TGCCAGTTATCATTTCGTGTGACTACAGTACCTGGTAAAACGGGGACAGTAGCCTG
GACTTTTAACTTTTCGCCCTGGACCAACGACCCCTAAAGAGAGGGATAAACGTGGGC
GTGGCCATGTTGACGGTGAGAGGGCATCATCCGGTTCATCATTTGGCTTGAGCGCAC
CCATGTCCATCGTTGCTGTGAGTTATGGGCTTATTGCCACCAAGATCCACAAGCA
25 AGGCTTGATTAAAGTCCAGTCGTCCCTTACGGGTCTCTCCTTTGTGCGCAGCAGCCT
TTTTTCTCTGCTGGTCCCCATATCAGGTGGTGGCCCTTATAGCCACAGTCAGAATC
CGTGAGTTATTGCAAGGCATGTACAAAGAAATTGGTATTGCAGTGGATGTGACA
AGTGCCCTGGCCTTCTTCAACAGCTGCCTCAACCCCATGCTCTATGTCTTCATGGG
CCAGGACTTCCGGGAGAGGCTGATCCACGCCCTTCCCGCCAGTCTGGAGAGGGC
30 CCTGACCGAGGACTCAACCCAAACAGTGACACAGCTACCAATTCTACTTTACCT
TCTGCAGAGGTGGCGTTACAGGCAAAGTGAGGAGGGAGCTGGGGGACACTTTTCG
AGCTCCCAGCTCCAGCTTCGTCTCACCTTGAGTTAGGCTGAGCCACAGGCATTTTC
CTGCTTATTTTAGGATTACCCACTCATCAGAAAAAAAAAAAAAGCCTTTGTGTCC
CCTGATTTGGGGAGAATAAACAGATATGAGTTTATTATTGACTTCTTTTTTGATTT
35 TGGACCTCAGCCTCGGGTGGTCAGGGTGGGAAATGATAGGAAGAAGCTGTCATC
TGCATCCTAGTTTGCCTGAAATGAACCCAAATAATACCCATTATTATTAGTCCTG
AATTATGAGTAGTGAATGATACCCATCATTCTGGCATCATGATGAGTAGTGTCCA
CTTCCATTCTGAAAAGTGCCCTGCTGTGAAAAATAAATTATATAGTCATCCTAGG
TAAATGAAGGAGGAGGGAGAAGTGTGAAAGAGTATGGCTTAAATCAGACAAGA
40 TATACAAGAAGATACTTT

SEQ ID NO: 436

>6269 BLOOD 234630.33 M59040 g180129 Human cell adhesion molecule (CD44) mRNA, complete cds. 0

45 CTTTCGCTCGCTCCCTCCCTCCGTCTTAGGTCACTGTTTTCAACCTCGAATAAAAAC
TGCAGCCAACTTCCGAGGCAGCCTCATTGCCAGCGGACCCAGCCTCTGCCAGG
TTCGGTCCGCCATCCTCGTCCCGTCTCCGCCGGCCCTGCCCGCGCCAGGGA
TCCTCCAGCTCCTTTTCGCCCGCGCCCTCCGTTTCGCTCCGGACACCATGGACAAGTT
TTGGTGGCACGCAGCCTGGGGACTCTGCCTCGTGCCGCTGAGCCTGGCGCAGATC

GATTTGAATATAACCTGCCGCTTTGCAGGTGTATTCCACGTGGAGAAAAATGGTC
 GCTACAGCATCTCTCGGACGGAGGCCGCTGACCTCTGCAAGGCTTTCAATAGCAC
 CTTGCCCACAATGGCCCAGATGGAGAAAGCTCTGAGCATCGGATTTGAGACCTG
 CAGGTATGGGTTTCATAGAAGGGCACGTGGTGATTCCCCGGATCCACCCCAACTCC
 5 ATCTGTGCAGCAAACAACACAGGGGTGTACATCCTCACATCCAACACCTCCCAGT
 ATGACACATATTGCTTCAATGCTTCAGCTCCACCTGAAGAAGATTGTACATCAGT
 CACAGACCTGCCCAATGCCTTTGATGGACCAATTACCATAACTATTGTTAACCGT
 GATGGCACCCGCTATGTCCAGAAAGGAGAATACAGAACGAATCCTGAAGACATC
 TACCCCAAGCAACCCTACTGATGATGACGTGAGCAGCGGCTCCTCCAGTGAAAGG
 10 AGCAGCACTTCAGGAGGTTACATCTTTTACACCTTTTCTACTGTACACCCCATCCC
 AGACGAAGACAGTCCCTGGATCACCGACAGCACAGACAGAATCCCTGCTACCAG
 AGACCAAGACACATTCCACCCCAAGTGGGGGGTCCCATAACCACTCATGGATCTGA
 ATCAGATGGACACTCACATGGGAGTCAAGAAGGTGGAGCAAACACAACCTCTGG
 TCCTATAAGGACACCCCAAATTCCAGAATGGCTGATCATCTTGGGCATCCCTCTT
 15 GGCCTTGGCTTTGATTCTTGCAGTTTGCATTGCAGTCAACAGTCAAGAAGGTGT
 GGGCAGAAGAAAAAGCTAGTGATCAACAGTGGCAATGGAGCTGTGGAGGACAG
 AAAGCCAAGTGGACTCAACGGAGAGGCCAGCAAGTCTCAGGAAATGGTGCATTT
 GGTGAACAAGGAGTCGTCAGAACTCCAGACCAGTTTATGACAGCTGATGAGAC
 AAGGAACCTGCAGAATGTGGACATGAAGATTGGGGTGTAAACACCTACACCATTA
 20 TCTTGGAAGAAACAACCGTTGGAAACATAACCATTACAGGGAGCTGGGACACT
 TAACAGATGCAATGTGCTACTGATTGTTTCATTGCGAATCTTTTTTAGCATAAAAT
 TTTCTACTCTTTTGTGTTTTGTGTTTTGTGTTTTGTTTAAAGTCAGGTCCAATTGTAAA
 AACAGCATTGCTTTCTGAAATTAGGGGCCCAATTAATAATCAGCAAGAATTGTATC
 GTTCCAGTTCCOACTTGGAGGCCCTTCATCCTCGGGTGTGCTATGGATGGCTTCT
 25 AACAAAACTACACATATGTATTCCTGATCGCCAACCTTTCCCCCACCAGCTAAG
 GACATTTCCCAGGGTTAATAGGGCCTGGTCCCTGGGAGGAAATTTGAATGGGTCC
 ATTTTGGCCTTCCATAGCCTAATCCCTGGGCATTGCTTTCCACTGAGGTTGGGGGT
 TGGGGTGTACTAGTTACACATCTTCAACAGACCCCTCTAGAAATTTTTCAGATG
 CTTCTGGGAGACACCCAAAGGGTGAAGCTATTTATCTGTAGTAACTATTTATCT
 30 GTGTTTTTGAATATTAAACCCTGGATCAGTCCTTTGATCAGTATAATTTTTTAA
 GTTACTTTGTCAGAGGCACAAAAGGGTTTAAACTGATTCATAATAAATATCTGTA
 CTTCTTCGATCTTCA

SEQ ID NO: 437

35 >6289 BLOOD GB_M80800 gi(164698) PIGTRKC Pig gp145-trkC (trkC) mRNA, complete cds

CGGGCTCCGATAACCGAAGCAGCGATCGGAGATGGATGTCTCTCTTTGCCAGCC
 AAGTGTAGTTTCTGGCGGATTTTCTTGCTGGGAAGCGTCTGGCTGGACTATGTGG
 GCTCCGTGCTGGCTTGCCCTGCAAATTGTGTCTGCAGCAAGACTGAGATCAATTG
 40 CCGGCGGCCGGACGATGGGAACCTCTTCCCCCTCCTGGAAGGGCAGGATTCAGG
 GAACAGCAATGGGAATGCCAGCATCAACATCACGGACATCTCAAGGAATATCAC
 TTCCATACACATAGAGAACTGGCGCGGTCTGCACACGCTCAACGCTGTGGACATG
 GAGCTCTACACCGGCCTCCAGAAGCTGACCATCAAGAACTCAGGACTTCGGAGC
 ATCCAGCCCAGAGCCTTTGCCAAGAACCCCCACCTGCGCTACATAAACCTGTCGA
 45 GTAACCGGCTCACACACTCTCATGGCAGCTCTTCCAGACGCTGAGTCTTCGGGA
 ATTGAGATTGGAGCAGAACTTCTTCAACTGCAGCTGTGACATCCGCTGGATGCAG
 CTGTGGCAGGAGCAGGGGGAGGCCAAGCTGAACAGCCAGAGCCTCTATTGCATC
 AGTGCCGATGGCTCCCAGCTCCCCCTCTTCCGCATGAACATTAGCCAGTGTGACC
 TTCCTGAGATCAGTGTGAGCCACGTCAATCTGACCGTTTCGGGAGGGTGACAATGC

TGTGTGTCACCTGCAATGGCTCTGGATCACCCCTGCCCCGACGTGGACTGGATCGTC
 ACTGGACTGCAGTCCATCAACACCCACCAGACAAATCTGAATTGGACCAACGTA
 CACGCCATCAACCTGACACTGGTCAATGTGACGAGTGAGGACAACGGCTTCACC
 CTGACGTGCATTGCAGAGAACGTGGTGGGCATGAGCAATGCCAGCGTCGCCCTC
 5 ACTGTTCACTACCCCCACGAGTGGTGAGCCTGGAGGAGCCAGAGCTGCGCCTG
 GAACACTGCATCGAGTTTGTGGTGGCTGGCAACCCGCCGCCACGCTGCACTGGC
 TGCACAACGGGCAGCCGCTGCGTGAGTCCAAGATCACCCACGTGGAGTACTACC
 AGGAGGGCGAGGTCTCCGAGGGCTGCCTGCTCTTCAACAAGCCCACCCACTACA
 ACAATGGCAACTACACACTCAATCGCCAAGAACCCCTTGGCACAGCCAACCAGA
 10 CCATCAATGGCCACTTCCTCAAGGAGCCTTTTCCAGAGAGCACGGATAACTTTGT
 CTCTTTCTATGAAGTGAGCCCCACCCCTCCCATCACTGTGACGCACAAGCCAGAG
 GAAGATACATTTGGGGTATCCATAGCTGTTGGACTTGCCGCTTTTGCCTGTGTCCT
 TCTGGTGGTTCTCTTTATCATGATCAACAAGTATGGTCGACGGTCTAAATTTGGA
 ATGAAGGGTCCTGTGGCTGTCATCAGTGGTGAAGAGGACTCAGCCAGCCCACTG
 15 CATCACGATCAACCATGGCATCACACACCCTCATCACTGGACGCCGGGCCGGA
 CACAGTGTCAATTGGCATGACCCGCATCCCAGTCATTGAGAACCCCCAGTACTTCC
 GCCAGGGACACAACCTGCCACAAGCCAGACACGTATGTGCAGCACATTAAAAGGA
 GGGACATCGTGCTGAAGCGAGAACTGGGTGAGGGAGCCTTTGGGAAGGTCTTCC
 TGGCCGAGTGCTACAACCTCAGCCCCACCAAGGTCAAGATGCTCGTGGCTGTGA
 20 AGGCCCTGAAGGATCCCACCCTGGCCGCCCGGAAGGATTTCCAGAGGGAGGCTG
 AGCTGCTCACCAACCTGCAGCATGAGCACATTGTCAAGTTCTATGGGGTGTGCGG
 CGACGGGGACCCACTCATCATGGTTTTTGTAGTACATGAACACGGGGATCTGAA
 CAAGTTCCTCAGGGGCCCATGGGGCAGATGCCATGATGCTCGTGGACGGCCAGCC
 ACGCCAGGCAAAAGGCGAGGTGGGGCTCTCCAGATGCTGCACATTGCCAGTCA
 25 GATCTGCTCTGGCATGGTGTACCTGGCCTCCCAGCATTTTGTGCACCGGGACCTG
 GCCACCAGGAACCTGCCTGGTTGGAGCCAACCTGCTGGTGAAGATTGGCGATTTCG
 GCATGTCCAGAGATGTCTACAGCACGGATTACTACAGGGTAGGAGGACACACCA
 TGCTCCCAATTCGCTGGATGCCTCCTGAAAGCATCATGTACCGGAAGTTCCTAC
 TGAGAGTGACGTGTGGAGCTTCGGGGTGATCCTCTGGGAGATCTTCACCTACGGA
 30 AAGCAGCCATGGTTCCAACCTCTCAAACACAGAGGTCAATTGAGTGCATCACCCAA
 GGTGCGGTTTTTGGAACGGCCCCGGGTCTGCCCCAAAGAGGTGTATGATGTCATGC
 TGGGGTGCTGGCAGAGGGAACCGCAGCAGCGGCTGAACATCAAGGAAATCTACA
 AAATCCTCCATGCTTTGGGGAAAGCCACCCCCATCTACCTGGACATCCTTGGCTA
 GCGGTGGCCGGTGGTCAC
 35

SEQ ID NO: 438

>6304 BLOOD 447973.12 D50683 g1827474 Human mRNA for TGF-betaIIIR alpha,
complete cds. 0

GTTGGCGAGGAGTTTCCTGTTTTCCCCCGCAGCGCTGAGTTGAAGTTGAGTGAGTC
 40 ACTCGCGCGCACGGAGCGACGACACCCCCGCGCGTGCACCCGCTCGGGACAGGA
 GCCGGACTCCTGTGCAGCTTCCCTCGGCCGCCGGGGGCCTCCCCGCGCCTCGCCG
 GCCTCCAGGCCCCCTCCTGGCTGGCGAGCGGGCGCCACATCTGGCCCCGCACATCT
 GCGCTGCCGGGCCCGGCGCGGGGTCCGGAGAGGGCGCGGCGCGGAGGCGCAGCC
 AGGGGTCCGGGAAGGCGCCGTCCGCTGCGCTGGGGGCTCGGTCTATGACGAGCA
 45 GCGGGGTCTGCCATGGGTGCGGGGGCTGCTCAGGGGCCTGTGGCCGCTGCACATC
 GTCCTGTGGACGCGTATCGCCAGCACGATCCCACCGCACGTTCAAGAGTCGGTTA
 ATAACGACATGATAGTCACTGACAACAACGGTGCAGTCAAGTTTCCACAACCTGT
 GTAAATTTTGTGATGTGAGATTTTCCACCTGTGACAACCAGAAATCCTGCATGAG
 CAACTGCAGCATCACCTCCATCTGTGAGAAGCCACAGGAAGTCTGTGTGGCTGTA

TGGAGAAAGAATGACGAGAACATAACACTAGAGACAGTTTGCCATGACCCCAAG
CTCCCCCTACCATGACTTTATTCTGGAAGATGCTGCTTCTCCAAAGTGCATTATGAA
GGAAAAAAAAAAGCCTGGTGAGACTTTCTTCATGTGTTCTGTAGCTCTGATGAG
TGCAATGACAACATCATCTTCTCAGAAGAATATAACACCAGCAATCCTGACTTGT
5 TGCTAGTCATATTTCAAGTGACAGGCATCAGCCTCCTGCCACCACTGGGAGTTGC
CATATCTGTCATCATCATCTTCTACTGCTACCGCGTTAACCGGCAGCAGAAGCTG
AGTTCAACCTGGGAAACCGGCAAGACGCGGAAGCTCATGGAGTTCAGCGAGCAC
TGTGCCATCATCCTGGAAGATGACCGCTCTGACATCAGCTCCACGTGTGCCAACA
ACATCAACCACAACACAGAGCTGCTGCCCATTGAGCTGGACACCCTGGTGGGGA
10 AAGGTCGCTTTGCTGAGGTCTATAAGGCCAAGCTGAAGCAGAACTTCAGAGC
AGTTTGAGACAGTGGCAGTCAAGATCTTTCCCTATGAGGAGTATGCCTCTTGAA
GACAGAGAAGGACATCTTCTCAGACATCAATCTGAAGCATGAGAACATACTCCA
GTTCTTGACGGCTGAGGAGCGGAAGACGGAGTTGGGGAAACAATACTGGCTGAT
CACCGCCTTCCACGCCAAGGGCAACCTACAGGAGTACCTGACGCGGCATGTCAT
15 CAGCTGGGAGGACCTGCGCAAGCTGGGCAGCTCCCTCGCCCGGGGGATTGCTCA
CCTCCACAGTGATCACACTCCATGTGGGAGGGCCCAAGATGCCCATCGTGCACAG
GGACCTCAAGAGCTCCAATATCCTCGTGAAGAACGACCTAACCTGCTGCCTGTGT
GACTTTGGGCTTTCCCTGCGTCTGGACCCTACTCTGTCTGTGGATGACCTGGCTAA
CAGTGGGCAGGTGGGAACTGCAAGATACATGGCTCCAGAAGTCCTAGAATCCAG
20 GATGAATTTGGAGAATGTTGAGTCCTTCAAGCAGACCGATGTCTACTCCATGGCT
CTGGTGCTCTGGGAAATGACATCTCGCTGTAATGCAGTGGGAGAAGTAAAAGAT
TATGAGCCTCCATTTGGTTCCAAGGTGGGGGAGCACCCCTGTGTGCGAAAGCATGA
AGGACAACGTGTTGAGAGATCGAGGGCGACCAAGAAATTTCCAGCTTCTGGCTCA
ACCACCAGGGCATCCAGATGGTGTGTGAGACGTTGACTGAGTGCTGGGACCAAG
25 ACCCAGAGGGCCCGTCTCACAGCCCAGTGTGTGGCAGAACGCTTCAGTGAGCTGG
AGCATCTGGACAGGCTCTCGGGGAGGAGCTGCTCGGAGGAGAAGATTCTGAAG
ACGGCTCCCTAAACACTACCAAATAGCTCTTCTGGGGCAGGCTGGGCCATGTCCA
AAGAGGCTGCCCCCTCTACCAAAGAACAGAGGCAGCAGGAAGCTGCCCCCTGAAC
TGATGCTTCTTGAAAACCAAGGGGGTCACTCCCCTCCCTGTAAGCTGTGGGGAT
30 AAGCAGAAACAACAGCAGCAGGGAGTGGGTGACATAGAGCATTCTATGCCTTTG
ACATTGTCATAGGATAAGCTGTGTAGCACTTCCTCAGGAAATGAGATTGATTTT
TACAATAGCCAATAACATTTGCACTTTATTAATGCCTGTATATAAATATGAATAG
CTATGTNTTATATATATNTATATNTCTATATATGTCTATAGCTCTATATATATAGC
CATACTTGAAAAGAGACAAGGAAAAACATCAAATATTCCCAGGAAATTGGTTT
35 TATTGGAGAACTCCAGAACCAAGCAGAGAAGGAAGGGACCCATGACAGCATTAG
CATTTGACAATCACACATGCAGTGGTTCTCTGACTGTAAAACAGTGAACCTTTGCA
TGAGGAAAGAGGCTCCATGTCTCACAGCCAGCTATGACCACATTGCACTTGCTTT
TGCAAAATAATCATTCCCTGCCTAGCACTTCTCTTCTGGCCATGGAACCTAAGTAC
AGTGGCACTGTTTGAGGACCAGTGTTCCCGGGGTTCTGTGTGCCCTTATTTCTCC
40 TGGACTTTTCATTTAAGCTCCAAGCCCCAAATCTGGGGGGCTAGTTTAGAACTC
TCCCTCAACCTAGTTTAGAACTCTACCCCATCTTTAATACCTTGAATGTTTTGAA
CCCCACTTTTTACCTTCATGGGTTGCAGAAAAATCAGAACAGATGTCCCCATCCA
TGCGATTGCCCCACCATCTACTAATGAAAAATTGTTCTTTTTTTCATCTTTCCCT
GCACTTATGTTACTATTCTCTGCTCCCAGCCTTCATCCTTTTCTAAAAAGGAGCAA
45 ATTCTCACTCTAGGCTTTATCGTGTTTACTTTTTTATTACACTTGACTTGATTTTCT
AGTTTTCTATACAAACACCAATGGGTTCCATCTTCTGGGCTCCTGATTGCTCAAG
CACAGTTTGGCCTGATGAAGAGGATTTCAACTACACAATACTATCATTGTCAAGGA
CTATGCACCTCAGGCACTCTAAAACACATGT

SEQ ID NO: 439

>6308 BLOOD Hs.22675 gnl|UG|Hs#S1969031 Homo sapiens mRNA for KIAA1144

protein, partial cds /cds=(119,1588) /gb=AB032970 /gi=6329972 /ug=Hs.22675 /len=5027

CACACTCGCACCCGCGCACGCACCGCCAGCAGGCAGCGGCCACCGCCGCGATGC
5 TCGCCCGCGGGTTGGGGAAGTTTCCCGCCGGCCTCGGCCGCGGGCACCCGTGCTC
CCAGGTGTAGCGCCCCCGCGCGGCGCGGGCGGCCGCGCCTCCAGCATGACCGG
CCAGAGCCTGTGGGACGTGTCTGGAGGCTAACGTCTGAGGACGGGGAGATCCGCAT
CAATGTGGGCGGCTTCAAGAGGAGGCTGCGCTCGCACACGCTGCTGCGCTTCCCC
GAGACGCGCCTGGGCCGCTTGCTGCTCTGCCACTCGCGCGAGGCCATTCTGGAGC
10 TCTGCGATGACTACGACGACGTCCAGCGGGAGTTCTACTTCGACCGCAACCCTGA
GCTCTTCCCCTACGTGCTGCATTTCTATCACACCGGCAAGCTTCACGTCATGGCTG
AGCTATGTGTCTTCTCCTTCAGCCAGGAGATCGAGTACTGGGGCATCAACGAGTT
CTTCATTGACTCCTGCTGCAGCTACAGCTACCATGGCCGCAAAGTAGAGCCCGAG
CAGGAGAAGTGGGACGAGCAGAGTGACCAGGAGAGCACCACGTCTTCCCTTCGAT
15 GAGATCCTTGCCCTTCTACAACGACGCCTCCAAGTTCGATGGGCAGCCCCTCGGCA
ACTTCCGCAGGCAGCTGTGGCTGGCGCTGGACAACCCCGGCTACTCAGTGCTGAG
CAGGGTCTTCAGCATCCTGTCCATCCTGGTGGTGATGGGGTCCATCATCACCATG
TGCCTCAATAGCCTGCCCCGATTTCCAAATCCCTGACAGCCAGGGCAACCCTGGCG
AGGACCCTAGGTTGAAATCGTGGAGCACTTTGGCATTGCCTGGTTCACATTTGA
20 GCTGGTGGCCAGGTTTGCTGTGGCCCTGACTTCCTCAAGTTCTTCAAGAATGCC
CTAAACCTTATTGACCTCATGTCCATCGTCCCCTTTTACATCACTCTGGTGGTGAA
CCTGGTGGTGGAGAGCACACCTACTTTAGCCAACTTGGGCAGGGTGGCCCAAGGT
CCTGAGGCTGATGCGGATCTTCCGCATCTTAAAGCTGGCCAGGCCTCCACTGGC
CTCCGCTCCCTGGGGGCCACTTTGAAATACAGCTACAAAGAAGTAGGGCTGCTCT
25 TGCTCTACCTCTCCGTGGGGATTTCCATCTTCTCCGTGGTGGCCTACACCATTGAA
AAGGAGGAGAACGAGGGCCTGGCCACCATCCCTGCCTGCTGGTGGTGGGCTACC
GTCAGTATGACCACAGTGGGGTACGGGGATGTGGTCCCAGGGACCACGGCAGGA
AAGCTGACTGCCTCTGCCTGCATCTTGGCAGGCATCCTCGTGGTGGTCCCTGCCCA
TCACCTTGATCTTCAATAAGTTCTCCCACTTTTACCGGCGCCAAAAGCAACTTGA
30 GAGTGCCATGCGCAGCTGTGACTTTGGAGATGGAATGAAGGAGGTCCCTTCGGT
CAATTTAAGGGACTATTATGCCATAAAGTTAAATCCCTTATGGCAAGCCTGACG
AACATGAGCAGGAGCTCACCAAGTGAAGTCAAGTTTAAATGATTCCCTACGTTAGC
CGGGAGGACTTGTACCCCTCCACCCACATTGCTGAGCTGCCTCTTGTGCCTCTG
GCACAGCCCAGGCACCTTATGGTTATGGTGTAAAGGAGTATGCCAGCCCCTGAG
35 GGGAGAGATGCATGGGATATGCACCCAGGTTTCTTTTACAGTTTTTAGAATCGTT
TTTAGAGGGTGGTGTGTCTGACACCATGCCTTTGCACCTTTCATGAAATGACAC
TCACTGGTCTTTGCATCGTGGGCATAAAATGTTACCTTTTTTGCCAGATGAGTAC
ACCCAGAATGCTAATTTTTCTGTCCATCGTGTACGCTATTCTAGTGCTTGTGGCCC
AGTACTGTCTATGAGTTGTCGTGCTCCTGTTTCTGAGGTTGTCGTGTGAGTTCTGT
40 ACAAAAAGCCCCACAAGTCGTCCAGTAGAAATGCATCTATGAGGTCAGCAAGG
ATATGATGAGATTTTGCTCACAGTCATGTGAAAACAAAATCTCAGCTCTTTATCC
ATTGCTTTCACTTAGTTTTAGTACCAAAACAAAGAGAATGCAAAGTTAAGCAGAC
TTGACCAATGCAAGTCTCTAAGTTGTTTTTATAAATGATCTGTAGTTCCGTGGCTT
GCATGGGTGCACCAATCATCTTTAGAACGATGTACACTGATGTTTCATCTCATAAA
45 TGTCACCTTTAGAGAATGTTACTTAGTTAAACATGCAGTGAAGATCGAATTTTTT
TCCCAAGAACAGATGTGTTAGGGAGAGGGGCTTCAGCTAAATAGTCCAAACCCT
AGGGTGCTTAAAGCCAAGTTAGTGCAGGCTGAGCCCCTTGTTTCACAGTCAAGCC
TCCTTGTTTCCTAGGGTGACTGTAGAGAAATGTATTTCCGGATGAGGTTTCTGATC
TAGGCCATTTGACCAAACCTTTGCTGTGTCTAAGATATTAGCATGTTTTTGAAATAT

TTATTTTTTAAGATGTTTAGGAGTAAGGTCGTGTTGTCTTCCTCAACTAAAAAGA
AGTTTACTGTTGTATCGTCTCCCTGAGGTGAACGTTGTTGGGTTGCTAGCAAGGG
CAGTAGCTTAAATACTTTTGTTCCTACTCTGAAAGCTCATCAAATGAGAGCCCT
TTTATTTCCAAGCAGAATTTAGTCAGATAATTTTGCTTCTAGGATATAGTATGTTG
5 TATATGATGCTGTGATTGCCCTGGAGTTCCTGCCATGACATGGAAACCTGGTGGT
ATGGAAGCATGTACTCAAAATATAGACGTGCACGATGGTGGTGTGGCTTACCCA
GGATGGAAACACTGCAGTTCTTACTTGCATTCCCCTGCCTTTCATGGGGGGTGA
CTGGGTAGAGGCCAGGAGAAAGGAAAGAGTTGTAAAATAAAAAACTGCTAGTTC
ATAAAATGTCATAAAAAATTGTAACTTGAAAAGCTTAATGCTATTCAAAAGAC
10 CTTCAAGCTTCCAACTTGTATTGAAGGGAGACGACTGTTTCCTCCTCCAAATG
CTCCTGCTCCTCTTGTTTCGGTTAACAGCACATAACATTGTGATGGGGAACCTGG
GTTTCCTCTATAAGATAATTCTTCTCCATCATCTTTAAGGTAATCTGATGGTTTTCC
AGGTGGCTTTCATTATTGTTCCATCTTTGAAAAGGCAATAGAACCCAGGGGTCTG
AGCATGGAGCTATCCAGGGTTTTTCATCCAAAGGTTGGGCCTCTTCTTAAGAGGTC
15 CTTTTGTGTTTCAGTTGATTGAAGATGATACTTACCTCATTGGAGGTGTGGCAAG
GATCTTATCAGAAGGCTTTGTGTTCTTGTAGTTGTCATGGCTACTACAGTGTGGGT
GATTTATTGAATGAATTCAGTCCACTTGTGTCCTGGAGCCCCCAGTTCAAATC
TTTCCATTGGACTGGAGGCTTGTGGGAGGCTGGGAGGTGGCTGTCTCCTAGTGTC
TACATCCGTGTCTCTGAAGCATCAGGAAAAGTGAGATGACTTAGAGGCAACTGG
20 GCACTGAATCAGAGGAGCAGAGTTATTTTTTCAGAATTTGCACATGGAACACTTAG
ATTTGGCTGGTGCTTCCAGCCCTGGAAGGCATAACATTTACGGACTCATCCCCAG
CTGCACTGAAGGCAGGTGGTGGTACAGACTTATGAGGACGGATCAGTTTGCCAA
GGCTGATGGTATTTGGGTCACTGAGGCTGGTATCCATGGCCGCTGACCAAGGAAGCT
TATGCAAAGTGGAAGCAAGGAACAAGGCAGATAAATCAGTCACTTTCATGAAG
25 ATTTTTCTAAACAAGAAGGCTTACCACCAAAAAAGAGGTAACCTAGTGGTTACCC
TTTGCAGATGTGAAAGCTGGAAAACCTTGACTTTTCTTTTTGGTAATGACTTGCATT
TATCTGGTGCCTTTCGTTGGAGGAATCCCAACGTGCTTTAGAGACTATCTTTTTAA
CATCTCTTGACATACATATATACTTATATAAAATATTATCTTGCCCAACTGGACC
TTTACTCACTTCTGAGCATGAGAATGTCCCAATAGCATTGAGTTTTTCAAGTGGT
30 GGTTCAGATAAGTGGGAGAAAGAACAACCCGGCTGGCTTAAACCTGGAGCTA
ATTCCCACAAGGAATGTAGACTGAATGGTGACCCAGGGAGAAATAATCTTCCTCT
CCCCTAAAGTCTCACTAAGGTTTGAAGTTTACAGGTGCTCTCCACTGGGTCTTTG
ATCGACCTTGCTAGATAACATCTAACTAAAAGCAGTTTCTTTTAGTCCCTGAAGC
TAACCAGGGAGAGTCAGGTTAATTTTCTGTAAAAATATGAGGTGACATCTTTGGC
35 AACCAGGCTGTCAGACTGACCTGTAAACCTCCTTTAGGGGGACAGAGTAGAAAC
TGGAGATGACTTGTTTCCAGCTGTGAGCTTGAGAGAAGTGTCACTCCCAGCATTT
GAAGGTTATTGTTTTCAATGCCAGTGGGCCAAATATATGGGCCAGGCTTTGATAT
CTGTGATGTGCATTTTGAAGTGCTGGGTGGGAAGTGACACGTCTGTTGCACAA
ATGCATATTGGTTATAGGTTTGTGTTTTCTGCCAAACCCCCACATTTCTCGGGTTT
40 GTGAGTGAGGAAGGGCATGTTGTAATGCCAAGCTGATTTGTAGCTCGTAAGGTA
GTAATTGGTATTTAACATTTGCATTTGTTATTTCTACTTATCTTAGCACTCAAATA
ATTGAACTACCTGCTAATTCTTGCCGCATTTCAAAGAAAATAAGTTGTTATGCAC
TTTGGGATAGTGGTGATCTGTACAGGCTGTGTGTTAGCTACTTGAAGGCGTAAC
GGTATTTCTTGTGTGTTTTAACAGCATGACTTCTTACAGAGCTGTAATTTTTAAAA
45 TTGAGGATGCCATATTTGAGATGTCAGTTTTAACACTCATTAAACACACTACTGTG
CAAGCATTGACACAGGCTGCACTG

SEQ ID NO: 440

>6321 BLOOD gi|177991|gb|M16405.1|HUMACHRM4 Human m4 muscarinic
acetylcholine receptor gene

TCTAGACCACCAGCCTGGACAACATACCAAGACCCTGTCTCTACAAATAAATAG
 5 ATAAATAAATAGACACTTTTTTTTAAAGTGTCAAAAGTGCTTGGCACTTAGTAGACC
 ATCAGTGTTAGGTGCTCATAACACCCGATTATTGCCTTGTCCCAGTGTCTTGTA
 CAGGGGTGGAGAGNAGGTGTTAAGAAATGACCGAATGGGTAAATGGATGAAC
 AGAACACCTCCCTCCAGAGCCCACATGCTCGTGGGCCTCTGGGACCACTCTCCTC
 CTCCTCTTGCTTCCCTGAGCTCCCCCAGCATGGCCTCTGTCCAGGCCTTGCGCTGC
 10 CTCCAGGCCTTTGCTGTGGCTACTGCCCCTGGAGCGCCATNTCCACAGCTCCTCCT
 GTGGCTGGCTCCTCATCACCCAGATGACCTGGTGGGTGAGGCCACCTAGCAAGG
 AGTCATGCCTGTCTGCCTTCTGACTCACTCTCTCATCACCTGCCTTTTTTTTCTT
 TTGTGGCTCACGTGTTTGCATGTCTCCCCCATGAGGCAGGGGGCCATGTGTGTC
 TTATTCACTTCTGTAGCCACAGCACCTGAGCAATGCTTGCCACATAGTAGGTGC
 15 TCAATTAATGTTGAATGAATGGGCAAAATGCGGGATGGCGGGACAGAGTTCTCT
 CAAGGCATTCTGCCAGAGAATGTCCCTCTGTACCTTGAATCCAGTGTACCTCCA
 GATGACTCCCCCATTCCCTCCTGTAGTTTCATGCTTTTCTCTCCCCCTTCCCTCCCCAG
 ACACGGCCTACCCACCCCTGGCAACCAACATGGCCAACCTTCACACCTGTCAATGG
 CAGCTCGGGCAATCAGTCCGTGCGCCTGGTCACGTCATCATCCACAATCGCTAT
 20 GAGACGGTGGAAATGGTCTTCATTGCCACAGTGACAGGCTCCCTGAGCCTGGTG
 ACTGTCGTGGGCAACATCCTGGTGATGCTGTCCATCAAGGTCAACAGGCAGCTGC
 TAGACAGTCAACAACCTACTTCCCTCTTCAGCCTGGCGTGTGCTGATCTCATCATAGG
 TAGCGCCTTCTCCATGAACCTCTACACCGTGTACATCATCAAGGGCTACTGGGCCCTG
 TAGCGCGGTGGTCTGCGACCTGTGGCTGGCCCTGGACTACGTGGTGAGCAAGGCCT
 25 CCGTCATGAACCTTCTCATCATCAGCTTTGACCGCTACTTCTGCGTCACCAAGCCT
 CTCACCTACCCTGCCCGGCGCACCAACCAAGATGGCAGGCCTCATGATTGCTGCTG
 CCTGGGTACTGTCTTCGTGCTCTGGGCGCCTGCCATCTTGTTCTGGCAGTTTGTG
 GTGGGTAAAGCGGACGGTGCCCGACAACCACTGCTTCATCCAGTTCCTGTCCAACC
 CAGCAGTGACCTTTGGCACAGCCATTGCTGCCTTCTACCTGCCTGTGGTTCATCAT
 30 GACGGTGCTGTACATCCACATCTCCCTGGCCAGTCGCAGCCGAGTCCACAAGCAC
 CGGCCCCGAGGGCCCCGAAGGAGAAGAAAGCCAAGACGCTGGCCTTCCTCAAGAGC
 CCACTAATGAAGCAGAGCGTCAAGAAGCCCCGCCCCGGAGGCCGCCCGGGAGG
 ACTGCGCAATGGCAAGCTGGAGGAGGCCCCCCCCGCCAGCGCTGCCACCGCCACC
 GCGCCCCGTGGCTGATAAGGACACTTCCAATGAGTCCAGCTCAGGCAGTGCCAC
 35 CCAGAACACCAAGGAACGCCAGCCACAGAGCTGTCCACCACAGAGGCCACCAC
 TCCCGCCATGCCCGCCCCCTCCCCTGCAGCCGCGGGCCCTCAACCCAGCCTCCAGA
 TGGTCCAAGATCCAGATTGTGACGAAGCAGACAGGCAATGAGTGTGTGACAGCC
 ATTGAGATTGTGCCTGCCACGCCGGCTGGCATGCGCCCTGCGGCCAACGTGGCCC
 GCAAGTTCGCCAGCATCGCTCGCAACCAGGTGCGCAAGAAGCGGCAGATGGCGG
 40 CCCGGGAGCGCAAAGTGACACGAACGATCTTTGCCATTCTGCTAGCCTTCATCCT
 CACCTGGACGCCCTACAACGTCATGGTCCTGGTGAACACCTTCTGCCAGAGCTGC
 ATCCCTGACACGGTGTGGTCCATTGGCTACTGGCTCTGCTACGTCAACAGCACCA
 TCAACCCTGCCTGCTATGCTCTGTGCAACGCCACCTTTAAAAAGACCTTCCGGCA
 CCTGCTGCTGTGCCAGTATCGGAACATCGGCACTGCCAGGTAGGCAGGCAGGAG
 45 TGCCCTAGGAGGTGCGGTGTGCGTGCCTGTGCTGGGGGACCACACGGCTCACTTG
 CTGTGGGGAAGAGTGCAGGCACCAATTCTGCGTTCACGTTTGCTGAGGAGGAAGTT
 CAGAAGAGGCTCTGTGGCTGCATTCAGAGACCAGATCTCTGCTCACCCGTGAGG
 AGGCTCACCCAGGGAGTGTCTGAACTGGGGCTGCCTGGCCACCTCTGTGGCCC
 TGCTTCAGCGAGCTGCGGGGCACTGGCCTGGGTGGGCACCTGCCCACTGTGACCA

ACCATCAGCAGTGCTGGAAGAATGGAGATCTGGATGGGGGCCGAAGCCCAGGGC
CCCCTCAGGAAGAACAAAG

SEQ ID NO: 441

5 >6329 BLOOD 1099618.13 J03516 g607029 Human elastase III B mRNA, complete cds,
clone pCL1E3.0

TTAGAGCCCCAGGTTCTGTGCCCTTTTCCTATCATCGCAAACTCATGATGCTCCG
GCTGCTCAGTTCCTCCTCCTTGTGGCCGTTGCCTCAGGCTATGGCCCACCTTCCT
CTCGCCCTTCCAGCCGCGTTGTCAATGGTGAGGATGCGGTCCCCTACAGCTGGCC
10 CTGGCAGGTTTCCCTGCAGTATGAGAAAAGTGGAAGCTTCTACCACACGTGTGGC
GGTAGCCTCATCGCCCCGACTGGGTTGTGACTGCCGGCCACTGCATCTCGAGCT
CCTGGACCTACCAGGTGGTGTGGGCGAGTACGACCGTGCTGTGAAGGAGGGCC
CCGAGCAGGTGATCCCCATCAACTCTGGGGACCTCTTTGTGCATCCACTCTGGAA
CCGCTCGTGTGTGGCCTGTGGCAATGACATCGCCCTCATCAAGCTCTCACGCAGC
15 GCCCAGCTGGGGAGACGCCGTCCAGCTCGCCTCACTCCCTCCCGCTGGTGACATC
CTTCCCAACGAGACACCCTGCTACATCACGGGCTGGGGCCGTCTCTATACCAACG
GGCCACTCCCAGACAAGCTGCAGGAGGCCCTGCTGCCCGTGGTGGACTATGAAC
ACTGCTCCAGGTGGAAGTGGTGGGGTTCCTCCGTGAAGAAGACCATGGTGTGTGC
TGGAGGGGACATCCGCTCCGGCTGCAACGGTGACTCTGGAGGACCCCTCAACTG
20 CCCACAGAGGATGGTGGCTGGCAGGTCCATGGCGTGACCAGCTTTGTTTCTGCC
TTTGGCTGCAACACCCGCGAGGAAGCCCACGGTGTTCACTCGAGTCTCCGCCTTCA

SEQ ID NO: 442

>6332 BLOOD 1095450.1 X87949 g1143491 Human mRNA for BiP protein. 0

CCAAGACAGCACAGACAGATTGACCTATTGGGGTGTTTCGCGAGTGTGAGAGGG
AAGCGCCGCGGCCTGTATTTCTAGACCTGCCCTTCGCCTGGTTCGTGGCGCCTTGT
30 GACCCCGGGCCCTGCCGCCTGCAAGTCGGAAATTGCGCTGTGCTCCTGTGCTAC
GGCCTGTGGCTGGACTGCCTGCTGCTGCCCAACTGGCTGGCAAGATGAAGCTCTC
CCTGGTGGCCGCGATGCTGCTGCTGCTCAGCGCGGCGCGGGCCGAGGAGGAGGA
CAAGAAGGAGGACGTGGGCACGGTGGTCGGCATCGACCTGGGGACCACTACTC
CTGCGTCGGCGTGTTCAAGAACGGCCGCGTGGAGATCATCGCCAACGATCAGGG
35 CAACCGCATCACGCCGTCTATGTCGCCTTCACTCCTGAAGGGGAACGTCTGATT
GGCGATGCCGCAAGAACCAGCTCACCTCCAACCCCGAGAACACGGTCTTTGAC
GCCAAGCGGCTCATCGGCCGACGTGGAATGACCCGTCTGTGCAGCAGGACATC
AAGTTCCTTGCCGTTCAAGGTGGTTGAAAAGAAAATAAACCATAACATTCAAGTTG
ATATTGGAGGTGGGCAAACAAAGACATTTGCTCCTGAAGAAATTCTGCCATGGTT
40 CTCATAAAATGAAAGAAACCGCTGAGGCTTATTTGGGAAAGAAGGTTACCCAT
GCAGTTGTTACTGTACCAGCCTATTTTAATGATGCCCAACGCCAAGCAACCAAAG
ACGCTGGAACCTATTGCTGGCCTAAATGTTATGAGGATCATCAACGAGCCTACGGC
AGCTGCTATTGCTTATGGCCTGGATAAGAGGGAGGGGGAGAAGAACATCCTGGT
GTTTGACCTGGGTGGCGGAACCTTCGATGTGTCTTCTCACCATTGACAATGGT
45 GTCTTCGAAGTTGTGGCCACTAATGGAGATACTCATCTGGGTGGAGAAGACTTTG
ACCAGCGTGTCATGGAACACTTCATCAAACGTACAAAAAGAAGACGGGCAAAG
ATGTCAGGAAAGACAATAGAGCTGTGCAGAACTCCGGCGCGAGGTAGAAAAG
GCCAAACGGGCCCTGTCTTCTCAGCATCAAGCAAGAATTGAAATTGAGTCCTTCT
ATGAAGGAGAAGACTTTTCTGAGACCCTGACTCGGGCCAAATTGAAAGAGCTCA

ACATGGATCTGTTCCGGTCTACTATGAAGCCCGTCCAGAAAGTGTTGGAAGATTC
 TGATTTGAAGAAGTCTGATATTGATGAAATTGTTCTTGTTGGTGGCTCGACTCGA
 ATTCCAAAGATTTCAGCAACTGGTTAAAGAGTTCTTCAATGGCAAGGAACCATCCC
 GTGGCATAAACCCAGATGAAGCTGTAGCGTATGGTGCTGCTGTCCAGGCTGGTGT
 5 GCTCTCTGGTGATCAAGATACAGGTGACCTGGTACTGCTTGATGTATGTCCCCTT
 ACACTTGGTATTGAAACTGTGGGAGGTGTCATGACCAAACCTGATTCCAAGGAAC
 ACAGTGGTGCCTACCAAGAAGTCTCAGATCTTTTCTACAGCTTCTGATAATCAAC
 CAACTGTTACAATCAAGGTCTATGAAGGTGAAAGACCCCTGACAAAAGACAATC
 ATCTTCTGGGTACATTTGATCTGACTGGAATTCCTCCTGCTCCTCGTGGGGTCCCA
 10 CAGATTGAAGTCACCTTTGAGATAGATGTGAATGGTATTCTTCGAGTGACAGCTG
 AAGACAAGGGTACAGGGAACAAAAATAAGATCACAATCACCAATGACCAGAAT
 CGCCTGACACCTGAAGAAATCGAAAGGATGGTTAATGATGCTGAGAAGTTTGCT
 GAGGAAGACAAAAAGCTCAAGGAGCGCATTGATACTAGAAAATGAGTTGGAAAG
 CTATGCCTATTCTCTAAAGAATCAGATTGGAGATAAAGAAAAGCTGGGAGGTAA
 15 ACTTTCCTCTGAAGATAAGGAGACCATGGAAAAAGCTGTAGAAGAAAAGATTGA
 ATGGCTGGAAAGCCACCAAGATGCTGACATTGAAGACTTCAAAGCTAAGAAGAA
 GGAAGTGGAAAGAAATTGTTCAACCAATTATCAGCAAACCTCTATGGAAGTGCAGG
 CCCTCCCCCAACTGGTGAAGAGGATACAGCAGAAAAAGATGAGTTGTAGACACT
 GATCTGCTAGTGCTGTAATATTGTAAATACTGGACTCAGGAACCTTTTGTTAGGAA
 20 AAAATTGAAAGAACTTAAGTCTCGAATGTAATTGGAATCTTCACCTCAGAGTGGA
 GTTGAAACTGCTATAGCCTAAGCGGCTGTTTACTGCTTTTCATTAGCAGTTGCTCA
 CATGTCCTTGGGTGGGGGGGAGAAGAAGAATFGGCCATCTTAAAAAGCGGGTAA
 AAAACCTGGGTAGGGTGTGTGTTACCTTCAAATGTTCTATTTAACAACCTGGG
 TCATGTGCATCTGGTGTAGGAAGTTTTTCTACCATAAGTGACACCAATAAATGT
 25 TTGTTATTTACACTGGAAAAAAAAAAAAAANGNGGCCNCCGA

SEQ ID NO: 443

>6336 BLOOD 988256.7 M21121 g339420 Human T-cell-specific protein (RANTES)

mRNA, complete cds. 0

30 GACGTAGGATCAAGACAGCACGTGGACCTCGCACAGCCTCTCCACAGGTACCA
 TGAAGGTCTCCGCGGCAGCCCTCGCTGTGCATCCTCATTGCTACTGCCCTCTGCG
 CTCCTGCATCTGCCTCCCCATATTCTCGGACACCACACCCTGCTGCTTTGCCTAC
 ATTGCCCGCCCACTGCCCGGTGCCACATCAAGGAGTATTTCTACACCAGTGGCA
 AGTGCTCCAACCCAGCAGTCGTCTTTGTACCCGAAAGAACCGCCAAGTGTGTGC
 35 CAACCCAGAGAAGAAATGGGTTCGGGAGTACATCAACTCTTTGGAGATGAGCTA
 GGATGGAGAGTCCTTGAACCTGAACTTACACAAATTTGCCTGTTTCTGCTTGCTCT
 TGTCTAGCTTGGGAGGCTTCCCCTCACTATCCTACCCACCCGCTCCTTGAAGG
 GCCCAGATTCTACCACACAGCAGCAGTTACAAAAACCTTCCCCAGGCTGGACGT
 GGTGGCTCACGCCTGTAATCCCCAGCACTTTTGGGAGGCTGAGGCGGGTGGACCC
 40 CGGGGTAAAGAGATCCGAGCCATTCTTGGTTACCCCGGTGAAACCCAGTCTCC
 ACTAAGAATTTAAAAAATTAGCCGGGCGTGGTAGCGGGCGCCTGTAGTCCCAGC
 TACTCGGGAGGCTGAGGCAGGAGAATGGCGTGAACCCGGGAGGCGGAGCTTGCA
 GTGAGCCGAGATCGCGCCACTGCACTCCAGCCTGGGAGACAGTGTAAGACTGTC
 TCAAAAAAATAAAAATAAAAATAAAAAGTCAGATCAGTAAACTGATAAACCCCT
 45 ACCCAACCTGATTAGGAAAGTGAGAACAGAAATTACCAGTATCATAATGAAAAG
 GAAATTATCAACACAGCTCCTAAAGACATTAAAAGGGTAAGAAGGGACCATTAT
 AAATAACCTTATGTCTACAAATTTGATAACCTGGGTCAAAGGATAGATTTCTTG
 GATAGATTCATTACCTAAATGACACCAAGATCAAACCAAAAAAATGTGAATAGCC
 CTATATTTATTAAATACACTATAGAAAACCAGACAAAGAAAATTTAAGGCCAG

ATGGTTTCAGACATTAATTCTACAGCCCTGACAAGGAAAAAGGGGATAGTTAGA
 ATTGGGTTACTAAAAAGTTAGCTTTTAATATCAACAGGAATACTGGTCAAGAGTC
 CACATTATGCAGGTTGTAAATGGTAGACACTATAAACAATAAGGAATCAGCTCT
 GATGATACTCATTTTTTCTTCCCTTTCAAAGGCTTGGCAAATAAAGCCGGGTCAA
 5 TTTGCTCCTTTGCCAGTCCTCTGACAGAGAAGAGTCTTGCTGCCCCGCTCCTGCAG
 AGTGCCCCCACATTTTCAGTCCAAGGGCCATCAGTTCACATTTGAGCTTCTCCAAA
 CCCAGCAACTCCAGTTCTGCAACAGAGGTGAACGCCAATAAATCTATAGTTTCCT
 TATCAATAAAGTGGCTTTCCCTGGCTGGCTTTCCCTGCAGTTTGGCAACGGCAACGTTT
 TCCCTTTCTTCAGGTGCTACCTCAGCAACTCTTTCCCATCAGTCCTTTCTTCTGTC
 10 TCTTTATCCTTATTTCAGTCCAGCCCCAGTGGGCTCCTCTTCTATGGGTTCTTTACTC
 TCTGCCTTCTTCTCCTGGGTCTCTTCTGTTTCTGTAACCATCCTGCTTTCCATGTGC
 TCTTTGGACTCCCCCAGCTCAGCACATGAGTCTTCTAAAATATGCCTCCCAGAGT
 CAGTCACCGGGATCTGCAGTTGTTCTGGTGATCCATGGTCTGTATTCACTACTCTC
 GCCCTCTGAGAACCACTGGGAAATTTGGCTGCCATCTCGACACCATTTGCTACCAA
 15 TTTTGGAGCATGGAAACCCATTCCCTGAAGTGCTTGGTGCTTCTTCACTGTCATCA
 TCTGAACTCTCAGAGTTGGACCCTTCTGCAGTCTCTAGTCCCTCCATGCCCAACCA
 GAAGCATCTCCTCTTTCCCGCACTGGCTCCTCTGTCTGTTTGAGATTTAGTAGGCC
 ATTGCCGTTTCCGATTCTCACTGATTCTGCTGAAACCATCTTGCTGGAGGCAGCC
 TGCATACCTTTGAGGACGGAATCCTCCAGACGCTCAGCCATCTCATGGCACTGCT
 20 GCTGGTAGTCGGGGCTGGTGAAGCAGTGCTTGGGTTCTACAAGCTTCCGCTGCAG
 TCGCTCCAGCCGCTTCTGCTCCTTTTCAGCCTCTCGCTCGGCTTGTTGTTTTACCCA
 TTTCAGCCATTGCTTTTTTCATGATTGACATCGCGTAGTCTCCTTCCACTGAGATCCC
 GACAAGCTTCTCGATTGGTTGTCTTCTCAATCTGAGCACCAAGTGCTCGGAGCAT
 AGATCCAAAACCTCCTTTTCCACCGCAAAGTCTGGGTTCCAAACTATAAACAGCT
 25 CCATGCTGCACTGTGTCACTGGTGTTAATGAGTGCTCCATTGCATTTACAAAAGA
 AGTTTTCCACTGGAACATTCTGATCTTGGCAGTGCCGGTGGATAAAATCCCGGAC
 GGTGCACCGACCCGAGGCACACCGCACCGCCTTGACCCGAAGCCAGGGCCGCG
 AATCCACACCAGCGCCGCGGCCTCCGGCCATGTCACCGACTACCCGAACCTCAA
 GCCTCTCTGTAGAC

30

SEQ ID NO: 444

>6352 BLOOD 346440.22 M24899 g537521 Human triiodothyronine (ear7) mRNA,
 complete cds. 0

CCCCGGGCGCAGGAGGCGGGCGGCCCGGCCCCACCGGCCCCCATGGACGCCCC
 35 CAGCACGGGGCGCTGAGACCCCCGCGTCGCTGCCAGCCCCGGTCCGGCGCGCCA
 CGCCGAGGGATCTCTGGACAGGACAAGACTCCGAAGCTACTCCCCAGCACACA
 GCCCGGGACCCACAAACCCAGCTTGCCCCCAGCCCTCCCACCTGCCACTCCCTGG
 CCCCTCCCACCGCCCCGCCCCCTTGGGGCGCAGGGCATGGTGTGAAAGGCCAAG
 TGCTGAGGCGGGTATCATGGGTGCTGTGCCCTAGGGCCTGGGTGGCAGGGGGTG
 40 GGTGGCCTGTGGGTGTGCCGGGGGGGCCAGTGTGCCACCCCAGTCTCTTGGCGT
 GCTGGAGGGCATCCTGGATGGAATTGAAGTGAATGGAACAGAAGCCAAGCAAG
 GTGGAGTGTGGGTCAGACCCAGAGGAGAACAGTGCCAGGTCACCAGATGGAAA
 GCGAAAAAGAAAGAACGGCCAATGTTCCCTGAAAACCAGCATGTCAGGGTATAT
 CCTAGTTACCTGGACAAAGACGAGCAGTGTGTCTGTGTGGGGACAAGGCAAC
 45 TGGTTATCACTACCGCTGTATCACTTGTGAGGGCTGCAAGGGCTTCTTTCGCCGC
 ACAATCCAGAAGAACCTCCATCCCACCTATTCTTGCAAATATGACAGCTGCTGTG
 TCATTGACAAGATCACCCGCAATCAGTGCCAGCTGTGCCGCTTCAAGAAGTGCAT
 CGCCGTGGGCATGGCCATGGACTTGGTTCTAGATGACTCGAAGCGGGTGGCCAA
 GCGTAAGCTGATTGAGCAGAACCGGGAGCGGCGGCGGAAGGAGGAGATGATCC

GATCACTGCAGCAGCGACCAGAGCCCCACTCCTGAAGAGTGGGATCTGATCCACA
 TTGCCACAGAGGGCCCATCGCAGCACCAATGCCCAGGGCAGCCATTGGAAACAGA
 GGCGGAAATTCCTGCCCGATGACATTGGCCAGTCACCCATTGTCTCCATGCCGGA
 CGGAGACAAGGTGGACCTGGAAGCCTTCAGCGAGTTTACCAAGATCATCACCCC
 5 GGCCATCACCCGTGTGGTGGACTTTGCCAAAAAACTGCCCATGTTCTCCGAGCTG
 CCTTGCGAAGACCAGATCATCCTCCTGAAGGGGTGCTGCATGGAGATCATGTCCC
 TGCGGGCGGCTGTCCGCTACGACCCTGAGAGCGACACCCTGACGCTGAGTGGGG
 AGATGGCTGTCAAGCGGGAGCAGCTCAAGAATGGCGGCCTGGGCGTAGTCTCCG
 ACGCCATCTTTGAACTGGGCAAGTCACTCTCTGCCTTTAACCTGGATGACACGGA
 10 AGTGGCTCTGCTGCAGGCTGTGCTGCTAATGTCAACAGACCGCTCGGGCCTGCTG
 TGTGTGGACAAGATCGAGAAGAGTCAGGAGGCGTACCTGCTGGCGTTCGAGCAC
 TACGTCAACCACCGCAAACACAACATTCCGCACTTCTGGCCCAAGCTGCTGATGA
 AGGAGAGAGAAGTGCAGAGTTCGATTCTGTACAAGGGGGCAGCGGCAGAAGGC
 CGGCCGGGCGGGTCACTGGGCGTCCACCCGGAAGGACAGCAGCTTCTCGGAATG
 15 CATGTTGTTCAAGGTCCGCAGGTCCGGCAGCTTGAGCAGCAGCTTGGTGAAGCG
 GGAAGTCTCCAAGGGCCGTTCTTCAGCACCAGAGCCCGAAGAGCCCGCAGCAG
 CGTCTCCTGGAGCTGCTCCACCGAAGCGGAATTCTCCATGCCCGAGCGGTCTGTG
 GGAAGACGACAGCAGTGAGGCGGACTCCCCGAGCTCCTCTGAGGAGGAACCGG
 AGGTCTGCGAGGACCTGGCAGGCAATGCAGCCTCTCCCTGAAGCCCCCAGAAG
 20 GCCGATGGGGAAGGAGAAGGAGTGCCATACCTTCTCCAGGCCTCTGCCCAAG
 AGCAGGAGGTGCCTGAAAGCTGGGAGCGTGGGCTCAGCAGGGCTGGTCACTCC
 CATCCCGTAAGACCACCTTCCCTTCCTCAGCAGGCCAAACATGGCCAGACTCCCT
 TGTCTTTTGTCTGTGTAGTTCCCTCTGCCTGGGATGGCCTTCCCCCTTTCTGTGCTG
 GCAAACATCTTACTTGTCTTTGAGGCCCCAACTCAAGTGTCACTCTCTCCCCAGC
 25 TCCCCAGGCAGAAATAGTTGTCTGTGCTTCCCTTGGTTCATGCTTCTACTGTGACA
 CTTATCTCACTGTTTTATAATTAGTCGGGCATGAGTCTGTTTCCCAAGCTAGACTG
 TGTCTGAATCATGTCTGTATCCCCAGTGCCCGGTGCAGGGCCTGGCATAGAGTAG
 GACTCCATAAAAGGTGTGTTGAATTGAACTGCGTCTGCCTCCTCCCCCGGGTCA
 GCGAGAGCCTGACCTACCTGCAGAGACAAGCACCACCGCGGTGAAGAGGCCCA
 30 GCTCCTCCTCGGTAAGCGCCAGGGAGTTGAGCTTCTCGCTGAAGTCGAACATGGC
 ACTGAGCAGGTCTCCCATGCCCATGGCACCAAGCTCCTGCAGGCTGTAGGTG

SEQ ID NO: 445

>6353 BLOOD Hs.73817 gnl|UG|Hs#S268571 Homo sapiens gene for LD78 alpha

35 precursor, complete cds /cds=(86,364) /gb=D90144 /gi=219905 /ug=Hs.73817 /len=781

CAGAAGGACACGGGCAGCAGACAGTGGTCAGTCCTTTCTTGGCTCTGCTGACACT
 CGAGCCCACATTCCGTCACCTGCTCAGAATCATGCAGGTCTCCACTGCTGCCCTT
 GCTGTCTCCTCTGCACCATGGCTCTCTGCAACCAGTTCTCTGCATCACTTGCTGC
 TGACACGCCGACCGCCTGCTGCTTCAGCTACACCTCCCGGCAGATTCCACAGAAT
 40 TTCATAGCTGACTACTTTGAGACGAGCAGCCAGTGCTCCAAGCCCGGTGTCATCT
 TCCTAACCAAGCGAAGCCGGCAGGTCTGTGCTGACCCAGTGAGGAGTGGGTCC
 AGAAATATGTCAGCGACCTGGAGCTGAGTGCCTGAGGGGTCCAGAAGCTTCGAG
 GCCAGCGACCTCGGTGGGCCCAGTGGGGAGGAGCAGGAGCCTGAGCCTTGGGA
 ACATGCGTGTGACCTCCACAGCTACCTCTTCTATGGACTGGTTGTTGCCAAACAG
 45 CCACACTGTGGGACTCTTCTTAACTTAAATTTTAATTTATTTATACTATTTAGTTTT
 TGTAATTTATTTTCGATTTACAGTGTGTTTGTGATTGTTTGCTCTGAGAGTTCCC
 CTGTCCCCTCCCCCTTCCCTCACACCGCGTCTGGTGACAACCGAGTGGCTGTCATC
 AGCCTGTGTAGGCAGTCATGGCACCAAGCCACCAGACTGACAAATGTGTATCG

GATGCTTTTGTTCAGGGCTGTGATCGGCCTGGGGAAATAATAAAGATGCTCTTTT
AAAAGGTAAA

SEQ ID NO: 446

5 >6372 BLOOD 902559.1 M34309 g183990 Human epidermal growth factor receptor
(HER3) mRNA, complete cds. 0

CTCTCACACACACACACCCCTCCCCTGCCATCCCTCCCCGGACTCCGGCTCCGGC
TCCGATTGCAATTTGCAACCTCCGCTGCCGTCGCCGCAGCAGCCACCAATTCGCC
AGCGGTTCAAGTGGCTCTTGCTCGATGTCTAGCCTAGGGGCCCCCGGGCCGGA
10 CTTGGCTGGGCTCCCTTCACCCTCTGCGGAGTCATGAGGGCGAACGACGCTCTGC
AGGTGCTGGGCTTGCTTTTCAGCCTGGCCCCGGGGCTCCGAGGTGGGCAACTCTCA
GGCAGTGTGTCCTGGGACTCTGAATGGCCTGAGTGTGACCGGCGATGCTGAGAA
CCAATACCAGACACTGTACAAGCTCTACGAGAGGTGTGAGGTGGTGTGATGGGGAA
CCTTGAGATTGTGCTCACGGGACACAATGCCGACCTCTCCTTCTGTCAGTGGATT
15 CGAGAAGTGACAGGCTATGTCTCGTGGCCATGAATGAATTCTCTACTCTACCAT
TGCCCAACCTCCGCGTGGTGGCAGGGACCCAGGTCTACGATGGGAAGTTTGCCAT
CTTCGTCATGTTGAACTATAACACCAACTCCAGCCACGCTCTGCGCCAGCTCCGC
TTGACTCAGCTCACCGAGATTCTGTCAGGGGGTGTATATTGAGAAGAACGATA
AGCTTTGTCACATGGACACAATTGACTGGAGGGACATCGTGAGGGACCGAGATG
20 CTGAGATAGTGGTGAAGGACAATGGCAGAAGCTGTCCCCCTGTCATGAGGTTT
GCAAGGGGCGATGCTGGGGTCTGGATCAGAAGACTGCCAGACATTGACCAAGA
GCAATCTGTGCTCCTCAGTGTAATGGTCACTGCTTTGGGCCCCAACCCCAACCAAGT
GCTGCCATGATGAGTGTGCCGGGGGCTGCTGAGGGCCCTCAGGACACAGACTGCTTT
GCTGCGCGCACTTCAATGACAGTGGAGCCTGTGTACCTCGCTGTCCACAGCCTC
25 TTGTCTACAACAAGCTAACTTTCCAGCTGGAACCCAATCCCCACACCAAGTATCA
GTATGGAGGAGTTTGTGTAGCCAGCTGTCCCCATAACTTTGTGGTGGATCAAACA
TCCTGTGTGAGGGCCTGTCTCCTGACAAGATGGAAGTAGATAAAAATGGGCTCA
AGATGTGTGAGCCTTGTGGGGGACTATGTCCCAAAGCCTGTGAGGGAACAGGCT
CTGGGAGCCGCTTCCAGACTGTGGACTCGAGCAACATTGATGGATTTGTGAACTG
30 CACCAAGATCCTGGGCAACCTGGACTTTCTGATCACCGGCCTCAATGGAGACCCC
TGGCACAAGATCCCTGCCCTGGACCCAGAGAAGCTCAATGTCTTCCGGACAGTAC
GGGAGATCACAGGTTACCTGAACATCCAGTCCTGGCCGCCCCACATGCACAACCTT
CAGTGTTTTTTCCAATTTGACAACCATTGGAGGCAGAAGCCTCTACAACCGGGGC
TTCTCATTGTTGATCATGAAGAACTTGAATGTCACATCTCTGGGCTTCCGATCCCT
35 GAAGGAAATTAGTGCTGGGCGTATCTATATAAGTGCCAATAGGCAGCTCTGCTAC
CACCCTCTTTGAACTGGACCAAGGTGCTTCGGGGGCCTACGGAAGAGCGACTA
GACATCAAGCATAATCGGCCGCGCAGAGACTGCGTGGCAGAGGGCAAAGTGTGT
GACCCACTGTGCTCCTCTGGGGGATGCTGGGGGCCAGGCCCTGGTCAGTGCTTGT
CCTGTCGAAATTATAGCCGAGGAGGTGTCTGTGTGACCCACTGCAACTTTCTGAA
40 TGGGGAGCCTCGAGAATTTGCCCATGAGGCCGAATGCTTCTCCTGCCACCCGGAA
TGCCAACCCATGGAGGGGCACTGCCACATGCAATGGGCTCGGGCTCTGATACTTGT
GCTCAATGTGCCCATTTTTCGAGATGGGCCCCACTGTGTGAGCAGCTGCCCCCATG
GAGTCCTAGGTGCCAAGGGCCCAATCTACAAGTACCCAGATGTTTCAAGATGAAT
GTCGGCCCCCTGCCATGAGAAGTGCACCCAGGGGTGTAAAGGACCAGAGCTTCAA
45 GACTGTTTAGGACAAACACTGGTGTGATCGGCAAAACCCATCTGACAATGGCTT
TGACAGTGATAGCAGGATTGGTAGTGATTTTCATGATGCTGGGCGGCACTTTTCT
CTACTGGCGTGGGCGCCGGATTGAGAATAAAAGGGCTATGAGGCGATACTTGGA
ACGGGGTGAGAGCATAGAGCCTCTGGACCCAGTGAGAAGGCTAACAAAGTCTT
GGCCAGAATCTTCAAAGAGACAGAGCTAAGGAAGCTTAAAGTGCTTGGCTCGGG

TGTCTTTGGAAGTGTGCACAAAGGAGTGTGGATCCCTGAGGGTGAATCAATCAA
GATTCCAGTCTGCATTAAAGTCATTGAGGACAAGAGTGGACGGCAGAGTTTTCA
AGCTGTGACAGATCATATGCTGGCCATTGGCAGCCTGGACCATGCCCACATTGTA
AGGCTCCTGGGACTATGCCCAGGGTTCATCTCTGCAGCTTGTCACCTCAATATTTGC
5 CTCTGGGTTCTCTGCTGGATCATGTGAGACAACACCGGGGGGCACTGGGGCCAC
AGCTGCTGCTCAACTGGGGAGTACAAATTGCCAAGGGAATGTACTACCTTGAGG
AACATGGTATGGTGCATAGAAACCTGGCTGCCCGAAACGTGCTACTCAAGTCAC
CCAGTCAGGTTTCAGGTGGCAGATTTTGGTGTGGCTGACCTGCTGCCTCCTGATGA
TAAGCAGCTGCTATACAGTGAGGCCAAGACTCCAATTAAGTGGATGGCCCTTGA
10 GAGTATCCACTTTGGGAAATACACACACCAGAGTGATGTCTGGAGCTATGGTGTG
ACAGTTTGGGAGTTGATGACCTTCGGGGCAGAGCCCTATGCAGGGCTACGATTG
GCTGAAGTACCAGACCTGCTAGAGAAGGGGGAGCGGTTGGCACAGCCCCAGATC
TGCACAATTGATGTCTACATGGTGTGATGGTCAAGTGTTGGATGATTGATGAGAACA
TTCGCCCAACCTTTAAAGAACTAGCCAATGAGTTCACCAGGATGGCCCCGAGACCC
15 ACCACGGTATCTGGTCATAAAGAGAGAGAGTGGGCCTGGAATAGCCCCTGGGCC
AGAGCCCCATGGTCTGACAAACAAGAAGCTAGAGGAAGTAGAGCTGGAGCCAG
AACTAGACCTAGACCTAGACTTGGAAGCAGAGGAGGACAACCTGGCAACCACCA
CACTGGGCTCCGCCCTCAGCCTACCAGTTGGAACACTTAATCGGCCACGTGGGAG
CCAGAGCCTTTTAAAGTCCATCATCTGGATACATGCCCATGAACCAGGGTAATCTT
20 GGGGAGTCTTGCCAGGAGTCTGCAGTTTCTGGGAGCAGTGAACGGTGCCCCCGTC
CAGTCTCTCTACACCCAATGCCACGGGGATGCCTGGCATCAGAGTCATCAGAGG
GGCATGTAACAGGCTCTGAGGCTGAGCTCCAGGAGAAAGTGTCAATGTGTAGAA
GGCCGGAGCAGGAGCCGGAAGCCACGGGCCACGCGGAGATAGCGCCTACCATTCCC
AGCGCCACAGTCTGCTGACTCCTGTTACCCCACTCTCCCCACCCGGGTTAGAGGA
25 AGAGGATGTCAACGGTTATGTCATGCCAGATACACACCTCAAAGGTACTCCCTCC
TCCCGGGAAGGCACCCTTTCTTCAGTGGGTCTCAGTTCTGTCTGGGTACTGAAG
AAGAAGATGAAGATGAGGAGTATGAATACATGAACCGGAGGAGAAGGCACAGT
CCACCTCATCCCCCTAGGCCAAGTTCCCTTGAGGAGCTGGGTTATGAGTACATGG
ATGTGGGGTTCAGACCTCAGTGCCTCTCTGGGCAGCACACAGAGTTGCCCACTCCA
30 CCCTGTACCCATCATGCCCACTGCAGGCACAACCTCCAGATGAAGACTATGAATAT
ATGAATCGGCAACGAGATGGAGGTGGTCTCTGGGGGTGATTATGCAGCCATGGGG
GCCTGCCCAGCATCTGAGCAAGGGTATGAAGAGATGAGAGCTTTTCAGGGGCCT
GGACATCAGGCCCCCATGTCCATTATGCCCGCCTAAAACTCTACGTAGCTTAG
AGGCTACAGACTCTGCCTTTGATAACCCTGATTACTGGCATAGCAGGCTTTTCCC
35 CAAGGCTAATGCCCAGAGAACGTAACCTCCTGCTCCCTGTGGCACTCAGGGAGCA
TTTAATGGCAGCTAGTGCCTTTAGAGGGTACCGTCTTCTCCCTATTCCCTCTCTCT
CCCAGGTCCCAGCCCCCTTTCCCCAGTCCCAGACAATTCCATTCAATCTTTGGAG
GCTTTTAAACATTTTGTACACAAAATTCTTATGGTATGTAGCCAGCTGTGCACTTTC
TTCTCTTTCCCAACCCCAAGGTTTTCTTATTTTGTGTGCTTTCCAGTCCC
40 ATTCCTCAGCTTCTTCACAGGCACTCCTGGAGATATGAAGGATTACTCTCCATAT
CCCTTCCCTCTCAGGCTCTTGACTACTTGGAAGTGGCTCTTATGTGTGCCTTTGTT
TCCCATCAGACTGTCAAGAAGAGGAAAGGGAGGAAACCTAGCAGAGGAAAGTG
TAATTTTGGTTTATGACTCTTAACCCCTAGAAAGACAGAAGCTTAAATCTGTG
AAGAAAGAGGTTAGGAGTAGATATTGATTACTATCATAATTCAGCACTTAACTAT
45 GAGCCAGGCATCATACTAACTTCACCTACATTATCTCACTTAGTCCTTTATCATC
CTTAAAACAATTCTGTGACATACATATTATCTCATTNNNNNNNNNNNNNNNNNNNN
NN
NN
NN

5

15

AGACGGGTGCTGGTGACTCGTCCACACTGCTCGCTTCGGATACTCCAGGGCGTC

20

TCGGGGGTCA GTGGCCCTGGGAGGTCAGGCATGAGCTATGAGAGGGGGTCCATGCTGTG

TGGGTGGCTCTCTCGTGTCTGAGCAGTGGGTGCTGTCAGCTGCTCACTGCTTGGCCA

25

CCGAGCACCACAAGGAAAGCCCTATGAGGTCAAGCTTGGGGGGCCCAACCAGCTAGACT
GCTACTGGGACGACGGGGAAGGCTGACGACGGCTCAAGCAGATCATGCCCCGACGGCA

CCCTACTCCGAGGACGCCAAGGTCAGCACCCCTGAAGGACATCATCCCCACCCCA
CCTACGCTCGACGACGGCGCTCGGACGGGGGACATTTCGACCTGCTGGAAGCTGACGACGACG

GCATACCTCCAGGAGGGGCTCCAGGGGCGACATTCACATCCCTCCAACTCAGCAGACC
GATCGACGCTTCTGGGGGCTACATCGGGGGGGGATGCTGGCTGGCTGGACGGGACAGGGGCTGGCT

CAATCACCCTCTCCCGCTACATCCGGCCCACTCTGCCCTCCCTGCAGCCAACGCCCTCCCT
TGGGGCAAGGGGGCTGGCACTGGCACTGCTGCACTGGGCTGGGGCTGCACTGCTGGGGGGGGCTGCACT

30

GAGCCTCCCTGACGCCCAAGCCACTGCGAGCAACTCGAGGGTGGCTCTGATCAGTGGT

GAGACGTGTAAC TGCC TGTACAACATCGACGCCAAGCC T GAGGAGCCGCAC TT

GTCCAAGAGGACATGGTGTGTGCTGGCTATGTGGAGGGGGCAAGGACGCCATGC

CAGGGTGACTCTGGGGGCCCACTCTCCCGCCCTGTGGAGGGTCTCTGGTACCTGA

1

ACACTCTGGCCTCCAGCTATGCCTCCTGGATCCAAAGCAAGGTGACAGAACTCCA

GCCTCGTGTGGTGCCCCAAACCCAGGAGTCCCAGCCCGACAGCAACCTCTGTGGC

AGCCACCTGGCCTTCAGCTCTGCCCCAGCCCAGGGCTTGCTGAGGCCCATCCTTT

TCCTGCCTCTGGGCTGGCTCTGGGCTCCTCTCCCCATGGCTCAGCGAGCACTG

CTTCCCTGATGGCCTTTGGACCCAGGGCCTGACTTGAGCCACTCCTTCCTTCAGG

ACTCTGCGGGAGGCTGGGGCCCCATCTTGATCTTTGAGCCCATTCCTTCTGGGTGT

GCTTTTGGGACCATCACTGAGAGTCAGGAGTTTTACTGCCTGTAGCAATGGCCA

GAGCCTCTGGCCCCCTCACCCACCATGGACCAGCCCATTTGGCCGAGCTCCTGGGGGA

GA CTGCTCCCGGCCCGCCTGCCAGACTGATGAGCACATCTCTCTGCCCTCTCCC

TGTGTTCTGGGCTGGGGCCACCTTTGTGCAAGCTTCGAGGACAGGAAAGGGCCCCAA

TCTTGCCCACTGGCCGCTGAGCGGCGCGCGAGCCCTGACTCCTGGACTCCGGAGGA

CTGAGCCCCCACCAGGAAGCTGGGCTGGGGCTTGGATCTGGGGTGGGAGTAACAGG

01G1GGCCCCC1ACCUGG1AC1C1CGGGCC1GGGGC1TGG1TC1CGCCC1CGGGAG1AG1AC

GCAGAAATGATTAAAATGTTTGAGCACAACTTGCCGTGCATGTGTGAAGTGAAA
 TGAAGAACATCCGCTCTTGGCCTCCCCTTCCCCTCCAAAGTCCAGGGCCACCAGA
 ACTGACTTTATTAAAAAAATGACAAAACAGGTCTATACATATTTACAGGCTGGGA
 GCCAGGAGGCTCAGGTCCGACAGCAGGGGCCAGGCTGCTCACTTCTTGGAGAGC
 5 TTGACTTGCTTGTGCTTGGGGGGTGCCCACTTGAGGCAGACGGAGTCCACTGTGA
 TGGGTGGTTTCTTATACTGGGCACCTTTTGAGGTGCTCCTCCACCAGCTTGGGTGTG
 ACACAGATCACGTGCTGGCCCTTCCAGTACTTGACCATATTGAGGGATTGCAGGG
 TACTGATGATGTCATTTTGGGTGATACTGGTCATCTGGCTGAGGTCCTTGATGGA
 CAGTGTGCCCCGGAAGTCCCGCAGGATCTCCAGCAGCACCCAGGACCAGTAGCT
 10 GCGGTAGCTGAGCTTGGCCAGGTGAGACAGCGGCTTCTCCGGGGAGCCGACTGT
 GCTCTCCAGCTTGGAGAGCTCATAACTGAAAGCGATGAGGAACTTCCCGTAGCC
 GCGGCGTTGGTAGGGGGGCAAGGTCAGGATGCAGGCCACATTGTTTCCATCCGG
 GGAATCCTTCTCCTTGGAGAAGTAGCCAACAATGTGGGCCCCCTGCCGGTCCACC
 TCAGTCAGGATGTAAAAGACGAACGGCTCCACGTCAAAGTACAGTGTCTTATGG
 15 TCCAGGAAAAGCTTGGCCAGCAGACACAGGTTCTGACAGTAAATCTTATGGTCTT
 TGCCATCAACTTCGTACACGGAGATGTTGCTCTTGCGGTAGATCTCTTCCCAGG
 GGGCTGCCGCCACTGGCACTGACCCAAGTGGAAGCGGTAGCTCTTCTCATATTTT
 ATGTACTTGAGGCAGTACTCGCAGAGCCAGAGCTTGGGCTGTTTCCCATAGTCTT
 CGGGGAATGGTGAGAAATACCAGGCATCAATTTCTAGTTCCCGATGTGGATCTT
 20 GTCCACATACTTCACCTTGGTGATCGCCTCATGCTCCTTCTCCAAGGCTGCTGTGG
 TGGGGTCCATCTCTGCATAAGTCTTCTGCACATGGTTGATCTCATCATGCTTGCGC
 TTTTGGTTGCGAGTGATCTTGGGCTCAGGCTGCTCTGCGAGCTCGCTCAGGTACTT
 CTCTGAGTTCTTCTGTAGAGATCTTCACTGTGTTGGTCAGCGCCAGCGGGTTCT
 TGTETACCCACTCGTCCAGCGCGCGGTTAAAGCCACGTAGTGTACATAGAATTC
 25 CTCTCGGCCCTCCTGGTCGTTCACTCGAGACTGGATCACTTCAGCAGAATGCCAG
 GTGCTATCCGGTCGCCGGCACAGGTACGTTTCTCCGATCTCCACCGTGACTTCCG
 GCTCGCCGCGCGCCGGGGTCGGCGGAGAGACGCGGCCCGGGGATGGGGCGGTCC
 CCTCAGCGGCCGCATTCTCCCCGGGCCCGGGCTCGCCCTCCCCCGCGACCCCTGA
 AGTCCCCGCCGCAACCGCCGACAGCTCCCTGTGCC

30

SEQ ID NO: 448

>6407 BLOOD 199338.3 M31315 g182291 Human coagulation factor XII (Hageman)
 mRNA, 3' end. 0

GCTGGACCAACGGACGGATGCCATGAGGGCTCTGCTGCTCCTGGGGTTCCTGCTG
 35 GTGAGCTTGGAGTCAACACTTTCGATTCCACCTTGGGAAGCCCCCAAGGAGCATA
 AGTACAAAGCTGAAGAGCACACAGTCGTTCTCACTGTACCGGGGAGCCCTGCC
 ACTTCCCCTTCCAGTACCACCGGCAGCTGTACCACAAATGTACCCACAAGGGCCG
 GCCAGGCCCTCAGCCCTGGTGTGCTACCACCCCAACTTTGATCAGGACCAGCGA
 TGGGGATACTGTTTGGAGCCCAAGAAAGTGAAAGACCACTGCAGCAAACACAGC
 40 CCCTGCCAGAAAGGAGGGACCTGTGTGAACATGCCAAGCGGCCCCCACTGTCTC
 TGTCCACAACACCTCACTGGAAACCACTGCCAGAAAGAGAAGTGCTTTGAGCCT
 CAGCTTCTCCGGTTTTTCCACAAGAATGAGATATGGTATAGAACTGAGCAAGCAG
 CTGTGGCCAGATGCCAGTGCAAGGGTCCTGATGCCCACTGCCAGCGGCTGGCCA
 GCCAGGCCTGCCGCACCAACCCGTGCCTCCATGGGGGTGCTGCTAGAGGTGG
 45 AGGGCCACCGCCTGTGCCACTGCCCGGTGGGCTACACCGGACCCTTCTGCGACGT
 GGACACCAAGGCAAGCTGCTATGATGGCCGCGGGCTCAGCTACCGCGGCCTGGC
 CAGGACCACGCTCTCGGGTGCGCCCTGTCAGCCGTGGGCCTCGGAGGCCACCTAC
 CGGAACGTGACTGCCGAGCAAGCGCGGAAGTGGGGACTGGGCGGCCACGCCTTC
 TGCCGGAACCCGGACAACGACATCCGCCCGTGGTGCTTCGTGCTGAACCGCGAC

CGGCTGAGCTGGGAGTACTGCGACCTGGCACAGTGCCAGACCCCAACCCAGGCG
 GCGCCTCCGACCCCGGTGTCCCCTAGGCTTCATGTCCCACTCATGCCCGCGCAGC
 CGGCACCGCCGAAGCCTCAGCCACGACCCGGACCCCGCCTCAGTCCCAGACCC
 CGGGAGCCTTGCCGGCGAAGCGGGAGCAGCCGCCTTCCCTGACCAGGAACGGCC
 5 CACTGAGCTGCGGGCAGCGGCTCCGCAAGAGTCTGTCTTCGATGACCCGCGTCGT
 TGGCGGGCTGGTGGCGCTACGCGGGGCGCACCCCTACATCGCCGCGCTGTACTG
 GGGCCACAGTTTCTGCGCCGGCAGCCTCATCGCCCCCTGCTGGGTGCTGACGGCC
 GCTCACTGCCTGCAGGACCGGCCCGCACCCGAGGATCTGACGGTGGTGCTCGGC
 CAGGAACGCCGTAACACAGCTGTGAGCCGTGCCAGACGTTGGCCGTGCGCTCC
 10 TACCGCTTGACGAGGCCTTCTCGCCCGTCAGCTACCAGCACGACCTGGCTCTGT
 TGCGCCTTCAGGAGGATGCGGACGGCAGCTGCGCGCTCCTGTCGCCTTACGTTCA
 GCCGGTGTGCTGCCAAGCGGCGCCGCGCGACCCCTCCGAGACCACGCTCTGCCA
 GGTGGCCGGCTGGGGCCACCAGTTCGAGGGGGCGGAGGAATATGCCAGCTTCCT
 GCAGGAGGCGCAGGTACCGTTCCTCTCCCTGGAGCGCTGCTCAGCCCCGGACGTG
 15 CACGGATCCTCCATCCTCCCCGGCATGCTCTGCGCAGGGTTCCTCGAGGGCGGCA
 CCGATGCGTGCCAGGGTGATTCCGGAGGGCCCGCTGGTGTGTGAGGACCAAGCTG
 CAGAGCGCCGGCTCACCTGCAAGGCATCATCAGCTGGGGATCGGGCTGTGGTG
 ACCGCAACAAGCCAGGCGTCTACACCGATGTGGCCTACTACCTGGCCTGGATCCG
 GGAGCACACCGTTTCCTGATTGCTCAGGGACTCATCTTTCCTCCTTGGTGATTCC
 20 GCAGTGAGAGAGTGGCTGGGGCATGGAAGGCAAGATTGTGTCCCATCCCCCAG
 TCGCGCCAGCTCCGCGCCAGGATGGCGCAGGAAGTCAATAAAGTGCTTTGAAAA

25 >6436 BLOOD gi|219919|dbj|D13515.1|HUMMARR Homo sapiens mRNA for key subunit
 of N-methyl-D-aspartate receptor, complete cds
 GCTTCAGCGCCCCTTCCCTCGGCCGACGTCCCGGGACCGCCGCTCCGGGGGAGAC
 GTGGCGTCCGCAGCCCGCGGGGCGGGGCGAGCGCAGGACGGCCCGGAAGCCCCG
 CGGGGGATGCGCCGAGGGCCCCGCGTTCGCGCCGCGCAGAGCCAGGCCCCGCGGC
 30 CCGAGCCCATGAGCACCATGCGCCTGCTGACGCTCGCCCTGCTGTTCTCCTGCTC
 CGTCGCCCCGTGCCGCGTGCAGCCCCAAGATCGTCAACATTGGCGCGGTGCTGAGC
 ACGCGGAAGCACGAGCAGATGTTCCGCGAGGCCGTGAACCAGGCCAACAAGCG
 GCACGGCTCCTGGAAGATTCAGCTCAATGCCACCTCCGTACGCACAAGCCCAAC
 GCCATCCAGATGGCTCTGTGCGGTGTGCGAGGACCTCATCTCCAGCCAGGTCTACG
 35 CCATCCTAGTTAGCCATCCACCTACCCCCAACGACCACTTCACTCCCACCCCTGTC
 TCCTACACAGCCGGCTTCTACCGCATAACCCGTGCTGGGGCTGACCACCCGCATGT
 CCATCTACTCGGACAAGAGCATCCACCTGAGCTTCCTGCGCACCGTGCCGCCCTA
 CTCCCACCAAGTCCAGCGTGTGGTTTGAGATGATGCGTGTCTACAGCTGGAACCA
 ATCATCCTGCTGGTCAGCGACGACCACGAGGGCCGGGCGGCTCAGAAACGCCTG
 40 GAGACGCTGCTGGAGGAGCGTGAGTCCAAGGCAGAGAAGGTGCTGCAGTTTGAC
 CCAGGGACCAAGAACGTGACGGCCCTGCTGATGGAGGCGAAAGAGCTGGAGGC
 CCGGGTCATCATCCTTTCTGCCAGCGAGGACGATGCTGCCACTGTATACCGCGCA
 GCCGCGATGCTGAACATGACGGGCTCCGGGTACGTGTGGCTGGTTCGGCGAGCGC
 GAGATCTCGGGGAACGCCCTGCGCTACGCCCCAGACGGCATCCTCGGGCTGCAG
 45 CTCATCAACGGCAAGAACGAGTCGGCCACATCAGCGACGCCGTGGGCGTGGTG
 GCCCAGGCCGTGCACGAGCTCCTCGAGAAGGAGAACATCACCGACCCGCCGCGG
 GGCTGCGTGGGCAACACCAACATCTGGAAGACCGGGCCGCTCTTCAAGAGAGTG
 CTGATGTCTTCCAAGTATGCGGATGGGGTGACTGGTCGCGTGGAGTTCAATGAGG
 ATGGGGACCGGAAGTTCGCCAACTACAGCATCATGAACCTGCAGAACCGCAAGC

TGGTGCAAGTGGGCATCTACAATGGCACCCACGTCATCCCTAATGACAGGAAGA
TCATCTGGCCAGGCGGAGAGACAGAGAAGCCTCGAGGGTACCAGATGTCCACCA
GACTGAAGATTGTGACGATCCACCAGGAGCCCTTCGTGTACGTCAAGCCCACGCT
GAGTGATGGGACATGCAAGGAGGAGTTCACAGTCAACGGCGACCCAGTCAAGAA
5 GGTGATCTGCACCGGGGCCAACGACACGTCGCCGGGCAGCCCCCGCCACACGGT
GCCTCAGTGTTGCTACGGCTTTTGCATCGACCTGCTCATCAAGCTGGCACGGACC
ATGAACTTCACCTACGAGGTGCACCTGGTGGCAGATGGCAAGTTCGGCACACAG
GAGCGGGTGAACAACAGCAACAAGAAGGAGTGGAATGGGATGATGGGCGAGCT
GCTCAGCGGGCAGGCAGACATGATCGTGGCGCCGCTAACCATAAACAACGAGCG
10 CGCGCAGTACATCGAGTTTTTCCAAGCCCTTCAAGTACCAGGGCCTGACTATTCTG
GTCAAGAAGGAGATTCCCCGGAGCACGCTGGACTCGTTCATGCAGCCGTTCCAG
AGCACACTGTGGCTGCTGGTGGGGCTGTCGGTGCACGTGGTGGCCGTGATGCTGT
ACCTGCTGGACCGCTTCAGCCCCTTCGGCCGGTTCAAGGTGAACAGCGAGGAGG
AGGAGGAGGACGCACTGACCCTGTCTCGGCCATGTGGTTCTCCTGGGGCGTCCT
15 GCTCAACTCCGGCATCGGGGAAGGCGCCCCCAGAAGCTTCTCAGCGCGCATCCT
GGGCATGGTGTGGGCGGGCTTTGCCATGATCATCGTGGCCTCCTACACCGCCAAC
CTGGCGGCCTTCCTGGTGTGGACCGGCCGGAGGAGCGCATCACGGGCATCAAC
GACCCTCGGCTGAGGAACCCCTCGGACAAGTTTATCTACGCCACGGTGAAGCAG
AGTCCGTGGATATCTACTTCCGGCGCCAGGTGGAGCTGAGCACCATGTACCGGC
20 ATATGGAGAAGCACAACTACGAGAGTGCGGCGGAGGCCATCCAGGCCGTGAGA
GACAACAAGCTGCATGCCTTCATCTGGGACTCGGCGGTGCTGGAGTTCGAGGCCT
CGCAGAAGTGCGACCTGGTGACGACTGGAGAGCTGTTTTTCCGCTCGGGGCTTCGG
CATAGGCATGCGCAAAGACAGCCCCTGGAAGCAGAACGTCTCCCTGTCCATCCTC
AAGTCCACAGAGAATGGCTTCATGGAAGACCTGGACAAGACGTGGGTTTCGGTAT
25 CAGGAATGTGACTCGCGCAGCAACGCCCTGCGACCCTTACTTTTGAGAACATGG
CCGGGGTCTTCATGCTGGTAGCTGGGGGCATCGTGGCCGGGATCTTCTGATTTT
CATCGAGATTGCCTACAAGCGGCACAAGGATGCTCGCCGGAAGCAGATGCAGCT
GGCCTTTGCCGCCGTTAACGTGTGGCGGAAGAACCTGCAGGATAGAAAGAGTGG
TAGAGCAGAGCCTGACCCTAAAAAGAAAGCCACATTTAGGGCTATCACCTCCAC
30 CCTGGCTTCCAGCTTCAAGAGGCGTAGGTCCTCCAAAGACACGAGCACCGGGGG
TGGACGCGGCGCTTTGCAAAAACCAAAAAGACACAGTGCTGCCGCGACGCGCTAT
TGAGAGGGAGGAGGGCCAGCTGCAGCTGTGTTCCCGTCATAGGGAGAGCTGAGA
CTCCCCGCCCGCCCTCCTCTGCCCCCTCCCCCGCAGACAGACAGACGGACG
GGACAGCGGCCCGGCCACGCAGAGCCCCGGAGCACCCACGGGGTTCGGGGGAGG
35 AGCACCCCCAG

SEQ ID NO: 450

>6437 BLOOD 242455.2 U72648.1 g3914602 Human alpha2-C4-adrenergic receptor gene,
complete cds. 0

40 GGCGCTCGATGTGCTGTTTTGCACCTCGTCGATCGTGCATCTGTGTGCCATCAGCC
TGGATCGCTACTGGTCGGTGACGCANGCCGTCGAGTACAACCTGAAGCGCACAC
CACGCNGCGTCAAGGCCACCATCGTCGCCGTGTGGCTCATCTCGGCCGTCTCTC
CTTCCCGCCGCTGGTCTCGCTCTACCGCCAGCCCGACGGCGCCGCTACCCGCAG
TGCGGCCTCAACGACGAGACCTGGTACATCCTGTCTCCTGCATCGGCTCCTTCTT
45 CGCGCCCTGCCTCATCATGGGCCTGGTCTACGCGCGCATCTACCGAGTGGCCAAG
CGTCGCACGCGCACGCTCAGCGAGAAGCGCGCCCCCGTGGGCCCCGACGGTGCG
TCCCCGACTACCGAAAACGGGCTGGGCGCGGCGGCAGGCGAGGCGAGAACGGG
CACTGCGCGCCCCCGCCCGCCGACGTGGAGCCGGACGAGAGCAGCGCAGCGGCC
GAGAGGCGGCGCGCCGGGGCCGTTGCGGCGGGGCGGGCGGCGGCGAGCGGGCG

CGGAGGGGGGCGCGGGCGGTGCGGACGGGCAGGGGGCGGGGCCGGGGGCGGCT
CAGTCGGGGGCGCTGACCGCCTCCAGGTCCCCGGGGCCCGGTGGCCGCTCTCGC
GCGCCAGCTCGCGCTCCGTTCGAGTTCTTCTGTGCGCGCCGGCGCCGGGCGCGCAG
CAGCGTGTGCCGCCGCAAGGTGGCCCAGGCGCGGAGAAGCGCTTCACCTTTGT
5 GCTGGCTGTGGTCATGGGCGTGTTCGTGCTCTGCTGGTTCCTTCTTCTCAGCT
ACAGCCTGTACGGCATCTGCCGCGAGGCCTGCCAGGTGCCCGGGCCCGCTCTTCAA
GTTCTTCTTCTGGATCGGCTACTGCAACAGCTCGCTCAACCCGGTCATCTACACG
GTCTTCAACCAGGATTTCCGGCGATCCTTTAAGCACATCCTCTTCCGACGGAGGA
GAAGGGGCTTCAGGCAGTGACTCGCACCCGTCTGGGAATCCTGGACAGCTCCGC
10 GCTCGGGGCTGGGCAGAAGGGGCGGCCCGGACGGGGGAGCTTTCCAGAGACCC
GGGGAGCTCTCCAGAGACCCGGGGATGGATTGGCCTCCAGGGCGCAGGGGAGG
GTGCGGCAGGGCAGGAGCTTGGCAGAGAGATAGCCGGGCTCCAGGGAGTGGGG
AGGAGAGAGGGGGAGACCCCTTTGCCTTCCCCCCTCAGCAAGGGGCTGCTTCTG
GGGCTCCCTGCCTGGATCCAGCTCTGGGAGCCCTGCCGAGGTGTGGCTGTGAGGT
15 CAGGGTTTTAGAGAGCAGTGGCAGAGGTAGCCCCCTAAATGGGCAAGCAAGGAG
CCCCCAAAGACACTACCACTCCCCATCCCCGTCTGACCAAGGGCTGACTTCTCC
AGGACCTAGTCGGGGGGTGGCTGCCAGGGGGCAAGGAGAAAGCACCGACAATC
TTTGATTACTGAAAGTATTTAAATGTTTGCCAAAAACAACAGCCAAAAACAACAA
ACTATTTTCTAAATAAACCTTTGTAATCTAAGATTGTCGGTGCTTTCTCCTTGCCC
20 CCTGGCAGCCACCCCCCGACTAGGTCCTGGAGAAGTCAGCCCTTGGTCAGACGG
GGATGGGGAGTGGTAGTGTGTTTCGGGGGGCTCCTTGCTCGCCCATTTAGGAAGC
TACCTCTGACACTGCTCTCTATAAACCTGACCTCACAGCCACACCTCGGAGGGC
CGCCACAGCTGGAT
25 SEQ ID NO: 451
>6460 BLOOD gi|603954|dbj|D43950.1|HUMKG1DD Homo sapiens mRNA for KIAA0098
protein, partial cds
ATTCCGGTTGTTGCACCATGGCGTCCATGGGGACCCTCGCCTTCGATGAATATGG
GCGCCCTTTCCTCATCATCAAGGATCAGGACCGCAAGTCCCGTCTTATGGGACTT
30 GAGGCCCTCAAGTCTCATATAATGGCAGCAAAGGCTGTAGCAAATACAATGAGA
ACATCACTTGGACCAAATGGGCTTGATAAGATGATGGTGGATAAGGATGGAGAT
GTGACTGTAACATAATGATGGGGCCACCATCTTAAGCATGATGGATGTTGATCATC
AGATTGCCAAGCTGATGGTGGAACTGTCCAAGTCTCAGGATGATGAAATTGGAG
ATGGAACCACAGGAGTGGTTGTCCTGGCTGGTGCCTTGTTAGAAGAAGCGGAGC
35 AATTGCTAGACCGAGGCATTCACCCAATCAGAATAGCCGATGGCTATGAGCAGG
CTGCTCGTGTTGCTATTGAACACCTGGACAAGATCAGCGATAGCGTCCTTGTTGA
CATAAAGGACACCGAACCCCTGATTGAGACAGCAAAAACCACGCTGGGCTCCAA
AGTGGTCAACAGTTGTCACCGACAGATGGCTGAGATTGCTGTGAATGCCGTCTC
ACTGTAGCAGATATGGAGCGGAGAGACGTTGACTTTGAGCTTATCAAAGTAGAA
40 GGCAAAGTGGGCGGCAGGCTGGAGGACACTAAACTGATTAAGGGCGTGATTGTG
GACAAGGATTTGAGTCACCCACAGATGCCAAAAAAGTGGAAGATGCGAAGATT
GCAATTCTCATATGTCCATTTGAACACCCAAACCAAAAACAAAGCATAAGCTG
GATGTGACCTCTGTGCAAGATTATAAAGCCCTTCAGAAATACGAAAAGGAGAAA
TTTGAAGAGATGATTCAACAAATTAAGAGAGACTGGTGCTAACCTAGCAATTTGTC
45 AGTGGGGCTTTGATGATGAAGCAAATCACTTACTTCTTCAGAACAACTGCCTGC
GGTTCGCTGGGTAGGAGGACCTGAAATTGAGCTGATTGCCATCGCAACAGGAGG
GCGGATCGTCCCCAGGTTCTCAGAGCTCACAGCCGAGAAGCTGGGCTTTGCTGGT
CTTGTACAGGAGATCTCATTTGGGACAATAAGGATAAAATGCTGGTCATCGAGC
AGTGTAAGAACTCCAGAGCTGTAACCATTTTTATTAGAGGAGGAAATAAGATGA

TCATTGAGGAGGCGAAACGATCCCTTCACGATGCTTTGTGTGTCATCCGGAACCT
CATCCGCGATAATCGTGTGGTGTATGGAGGAGGGGCTGCTGAGATATCCTGTGCC
CTGGCAGTTAGCCAAGAGGCGGATAAGTGCCCCACCTTAGAACAGTATGCCATG
AGAGCGTTTGCCGACGCACTGGAGGTCATCCCCATGGCCCTCTCTGAAAACAGTG
5 GCATGAATCCCATCCAGACTATGACCGAAGTCCGAGCCAGACAGGTGAAGGAGA
TGAACCCTGCTCTTGGCATCGACTGTTTGCACAAGGGGACAAATGATATGAAGCA
ACAGCATGTCATAGAAACCTTGATTGGCAAAAAGCAACAGATATCTCTTGCAAC
ACAAATGGTTAGAATGATTTTGAAGATTGATGACATTTCGTAAGCCTGGAGAATCT
GAAGAATGAAGACATTGAGAAAACCTATGTAGCAAGATCCACTTCTGTGATTAAG
10 TAAATGGATGTCTCGTGATGCATCTACAGTTATTTATTGTTACATCCTTTTCCAGA
CACTGTAGATGCTATAATAAAAATAGCTGTTTGGTAACCATAGTTTCACTTGTTT
AAAGCTGTGTAATCGTGGGGGTACCATCTCAACTGCTTTTGTATTCAATTGTATTAA
AAGAATCTGTTTAAACAACCTTTATCTTCTCTCGGGTTTAAGAAACGTTTATTGT
AACAGTAATTAATGCTGCCTTAATTG

15

SEQ ID NO: 452

>6469 BLOOD 478620.78 D55696 g1890049 Human mRNA for cysteine protease, complete
cds. 0

20

GCGGCGGCGCCCGCAGCAATCACAGCAGTGCCGACGTCGTGGGTGTTTGGTGTG
AGGCTGCGAGCCGCGCGAGTTCTCACGGTCCCGCCGGCGCCACCACCGCGGTC
ACTCACCGCCGCGCCGCCACCACTGCCACCACGGTCGCCTGCCACAGGTGTCTG

25

CAATTGAACTCCAAGGTGCAGAATGGTTTGGAAAGTAGCTGTATTCCTCAGTGTG
GCCCTGGGCATTGGTGCCGTTTCTATAGATGATCCTGAAGATGGAGGCAAGCACT
GGGTGGTGATCGTGGCAGGTTCAAATGGCTGGTATAATTATAGGCACCAGGCAG

30

ACGCGTGCCATGCCTACCAGATCATTACCGCAATGGGATTCTGACGAACAGAT
CGTTGTGATGATGTACGATGACATTGCTTACTCTGAAGACAATCCCCTCCAGGA
ATTGTGATCAACAGGCCCAATGGCACAGATGTCTATCAGGGAGTCCCGAAGGAC
TACACTGGAGAGGATGTTACCCCAAAAATTTCTTGCTGTGTTGAGAGGCGATG

35

CAGAAGCAGTGAAGGGCATAGGATCCGGCAAAGTCCTGAAGAGTGGCCCCCAGG
ATCACGTGTTCACTTACTTCACTGACCATGGATCTACTGGAATACTGGTTTTTCCC
AATGAAGATCTTCATGTAAAGGACCTGAATGAGACCATCCATTACATGTACAAA

40

CACAAAATGTACCGAAAGATGGTGTTCTACATTGAAGCCTGTGAGTCTGGGTCCA
TGATGAACCACCTGCCGGATAACATCAATGTTTATGCAACTACTGCTGCCAACCC
CAGAGAGTCGTCCTACGCCTGTTACTATGATGAGAAGAGGTCCACGTACCTGGG

45

GGACTGGTACAGCGTCAACTGGATGGAAGACTCGGACGTGGAAGATCTGACTAA
AGAGACCCTGCACAAGCAGTACCACCTGGTAAAATCGCACACCAACACCAGCCA
CGTCATGCAGTATGGAAACAAAACAATCTCCACCATGAAAGTGATGCAGTTTCA

50

GGGTATGAAACGCAAAGCCAGTTCTCCCGTCCCCCTACCTCCAGTCACACACCTT
GACCTCACCCCCAGCCCTGATGTGCCTCTCACCATCATGAAAAGGAAACTGATGA
ACACCAATGATCTGGAGGAGTCCAGGCAGCTCACGGAGGAGATCCAGCGGCATC

55

TGGATGCCAGGCACCTCATTGAGAAGTCAGTGCGTAAGATCGTCTCCTTGCTGGC
AGCGTCCGAGGCTGAGGTGGAGCAGCTCCTGTCCGAGAGAGCCCCGCTCACGGG
GCACAGCTGCTACCCAGAGGCCCTGCTGCACTTCCGGACCCACTGCTTCAACTGG

60

CACTCCCCACGTACGAGTATGCGTTGAGACATTTGTACGTGCTGGTCAACCTTT
GTGAGAAGCCGTATCCGCTTCACAGGATAAAATTGTCCATGGACCACGTGTGCCT
TGGTCACTACTGAAGAGCTGCCTCCTGGAAGCTTTTCCAAGTGTGAGCGCCCCAC

65

CGACTGTGTGCTGATCAGAGACTGGAGAGGTGGAGTGAGAAGTCTCCGCTGCTC
GGGCCCTCCTGGGGAGCCCCCGCTCCAGGGCTCGCTCCAGGACCTTCTTCACAAG
ATGACTTGCTCGCTGTTACCTGCTTCCCCAGTCTTTTCTGAAAACTACAAATTAG

GGTGGGAAAAGCTCTGTATTGAGAAGGGTCATATTTGCTTTCTAGGAGGTTTGT
 GTTTTGCCTGTTAGTTTTGAGGAGCAGGAAGCTCATGGGGGCTTCTGTAGCCCCCT
 CTCAAAGGAGTCTTTATTCTGAGAATTTGAAGCTGAAACCTCTTTAAATCTTCA
 GAATGATTTTTATTGAAGAGGGCCGCAAGCCCCAAATGGAAAACGTTTTTTAGAA
 5 AATATGATGATTTTTGATTGCTTTTGTATTTAATTCTGCAGGTGTTCAAGTCTTAA
 AAAATAAAGATTTATAACAGAACCCAAATATTCACGT

SEQ ID NO: 453

>6521 BLOOD 244633.12 L11066 g307322 Human mRNA sequence. 0

10 CGAGGACCGGGGCTGTCCGAGATACGGCCTTCATATCCCTCTTCCTCCCCTGGAC
 TCTTTCTGAGCTCAGAGCCGCCGAGCCGGGACAGGAGGGCAGGCTTTCTCCAAC
 CATCATGCTGCGGAGCATATTACCTGTACGCCCTGGCTCCGGGAGCGGCAGTCGA
 GTATCCTCTGGTCAGGCGGCGCGGGCGGCGCCTCAGCGGAAGAGCGGGCCTCTG
 NNGGCCGCATGTGACCAACCCCCGGCCCCCTCACCCNNCACGTGGTTGGAGGTTT
 15 CCAGAAGCGCTGCCGCCACCGCATCGCGCAGCTCTTTGCCGTGCGAGCGCTTGTT
 TGCTGCCTCGTACTCCTCCATTTATCCGCCATGATAAGTGCCAGCCGAGCTGCAG
 CAGCCCGTCTCGTGGGCGCCGCGAGCCTCCCGGGGGCCCTACGGCCGCCGCCACCA
 GGATAGCTGGAATGGCCTTAGTCATGAGGCTTTTAGACTTGTTTCAAGGCGGGAT
 TATGCATCAGAAGCAATCAAGGGAGCAGTTGTTGGTATTGATTTGGGTACTACCA
 20 ACTCCTGCGTGGCAGTTATGGAAGGTAAACAAGCAAAGGTGCTGGAGAATGCCG
 AAGGTGCCAGAACCACCCCTTCAGTTGTGGCCTTTACAGCAGATGGTGAGCGACT
 TGTGTTGGAATGCCGGCCAAGCGACAGGCTGTACCAACCCAAACAATAGATTTTAT
 TCGAGGCTACCAAGCGTCTCATTGGCCGGCGATATGATGATCCTGAAGTACAGAAAGAC
 ATTAAAAATGTTCCCTTTAAAATTGTCGGTGCCTCCAATGGTGATGCCTGGGTTG
 25 AGGCTCATGGGAAATTGTATTCTCCGAGTCAGATTGGAGCATTGTGTGTTGATGAA
 GATGAAAGAGACTGCAGAAAATTACTTGGGGCACACAGCAAAAAATGCTGTGAT
 CACAGTCCCAGCTTATTTCAATGACTCGCAGAGACAGGCCACTAAAGATGCTGGC
 CAGATATCTGGACTGAATGTGCTTCGGGTGATTAATGAGCCACAGCTGCTGCTC
 TTGCCTATGGTCTAGACAAATCAGAAGACAAAGTCATTGCTGTATATGATTTAGG
 30 TGGTGGAACTTTTGATATTTCTATCCTGGAAATTCAGAAAGGAGTATTTGAGGTG
 AAATCCACAAATGGGGATACCTTCTTAGGTGGGGAAGACTTTGACCAGGCCTTGC
 TACGGCACATTGTGAAGGAGTTCAAGAGAGAGACAGGGGTTGATTTGACTAAAG
 ACAACATGGCACTTCAGAGGGTACGGGAAGCTGCTGAAAAGGCTAAATGTGAAC
 TCTCCTCATCTGTGCAGACTGACATCAATTTGCCCTATCTTACAATGGATTCTTCT
 35 GGACCCAAGCATTGGAATATGAAGTTGACCCGTGCTCAATTTGAAGGGATTGTCA
 CTGATCTAATCAGAAGGACTATCGCTCCATGCCAAAAGCTATGCAAGATGCAG
 AAGTCAGCAAGAGTGACATAGGAGAAGTGATTCTTGTGGGTGGCATGACTAGGA
 TGCCCAAGGTTTCAGCAGACTGTACAGGATCTTTTTGGCAGAGCCCCAAGTAAAGC
 TGTCAATCCTGATGAGGCTGTGGCCATTGGAGCTGCCATTACGGGAGGTGTGTTG
 40 GCCGGCGATGTCACGGATGTGCTGCTCCTTGATGTCACTCCCCTGTCTCTGGGTAT
 TGAAACTCTAGGAGGTGTCTTTACCAAACCTTATTAATAGGAATACCACTATTCCA
 ACCAAGAAGAGCCAGGTATTCTCTACTGCCGCTGATGGTCAAACGCAAGTGGA
 ATTAAGTGTGTGTCAGGGTGAAAGAGAGATGGCTGGAGACAACAACTCCTTGA
 CAGTTTACTTTGATTGGAATTCACACAGCCCCTCGTGGAGTTCCTCAGATTGAAG
 45 TTACATTTGACATTGATGCCAATGGGATAGTACATGTTTCTGCTAAAGATAAAGG
 CACAGGACGTGAGCAGCAGATTGTAATCCAGTCTTCTGGTGGATTAAAGCAAAGA
 TGATATTGAAAATATGGTTAAAAATGCAGAGAAATATGCTGAAGAAGACCGGCG
 AAAGAAGGAACGAGTTGAAGCAGTTAATATGGCTGAAGGAATCATTCACGACAC
 AGAAACCAAGATGGAAGAATTCAAGGACCAATTACCTGCTGATGAGTGCAACAA

GCTGAAAGAAGAGATTTCCAAAATGAGGGAGCTCCTGGCTAGAAAAGACAGCGA
AACAGGAGAAAATATTAGACAGGCAGCATCCTCTCTTCAGCAGGCATCACTGAA
GCTGTTTCGAAATGGCATACAAAAAGATGGCATCTGAGCGAGAAGGCTCTGGAAG
TTCTGCACTGGGGAACAAAGGAAGATCAAAAGGAGGAAAACAGTATAATA

5

SEQ ID NO: 454

>6538 BLOOD 332156.1 AF004021 g2257849 Human prostaglandin F2 alpha receptor
mRNA, complete cds. 0

10 GCCGCGCGCGCCCCGCAGTTTCCGCGCTAAGGGAACGAGTGCGCGGAGGGGACG
AGCGGCTGGACCACAGCCGGCGCCCGATCAGGATCTCCGCGCTGGGATCGGTGG
AACTTGAGGCAGCGGCGGCGCGGGGCGCCATGGCACACCGAGCGGCTCCGTCTT
CTGCTCCTCAGAGAGCCCGGCTGGCGGCCTGGGATGACAAGATGTCTGGACTGC
AATCCTGCACAGTTTTTGAGAGGGAGATGACTTGAGTGGTTGGCTTTTATCTCCAC
AACAATGTCCATGAACAATTCCAAACAGCTAGTGTCTCCTGCAGCTGCGCTTCTT
15 TCAAACACAACCTGCCAGACGGAAAACCGGCTTTCCGTATTTTTTTTTCAGTAATCT
TCATGACAGTGGGAATCTTGTCAAACAGCCTTGCCATCGCCATTCTCATGAAGGC
ATATCAGAGATTTAGACAGAAGTCCAAGGCATCGTTTCTGCTTTTGGCCAGCGGC
CTGGTAATCACTGATTTCTTTGGCCATCTCATCAATGGAGCCATAGCAGTATTTGT
ATATGCTTCTGATAAAGAATGGATCCGCTTTGACCAATCAAATGTCCTTTGCAGT
20 ATTTTGGTATCTGCATGGTGTCTTCTGGTCTGTGCCCACTTCTTCTAGGCAGTGT
GATGGCCATTGAGCGGTGTATTGGAGTCACAAAACCAATATTTTCATTCTACGAAA
ATTACATCCAAACATGTGAAAATGATGTTAAGTGGTGTGTGCTTGTTTGTGTTTTT
ACATAGCTTTGCTGCCCATCCFTGGACATCGAGACTATAAAATTCAGGGCTCGAGG
ACCTGGTGTCTTCTACAACACAGAAGACATCAAAGACTGGGAAGATAGATTTTATC
25 TTCTACTTTTTTCTTTTCTGGGGCTCTTAGCCCTTGGTGTTCATTGTTGTGCAATG
CAATCACAGGAATTACACTTTTAAGAGTTAAATTTAAAAGTCAGCAGCACAGAC
AAGGCAGATCTCATCATTTGGAAATGGTAATCCAGCTCCTGGCGATAATGTGTGT
CTCCTGTATTTGTTGGAGCCCATTTCTGGTTACAATGGCCAACATTGGAATAAAT
GGAAATCATTCTCTGGAAACCTGTGAAACAACACTTTTTGCTCTCCGAATGGCAA
30 CATGGAATCAAATCTTAGATCCTTGGGTATATATTCTTCTACGAAAGGCTGTCCTT
AAGAATCTCTATAAGCTTGCCAGTCAATGCTGTGGAGTGCATGTCATCAGCTTAC
ATATTTGGGAGCTTAGTTCCATTAAAAATTCCTTAAAGGTTGCTGCTATTTCTGAG
TCACCAGTTGCAGAGAAATCAGCAAGCACCTAGCTTAATAGGACAGTAAATCTG
TGTGGGGCTAGAACAAAATTAAGACATGTTTGGCAATATTTTCAGTTAGTTAAATA
35 CCTGTAGCCTAACTGGAAAATTCAGGCTTCATCATGTAGTTTGAAGATACTATTG
TCAGATTCAGGTTTTGAAATTTGTCAAATAAACAGGATAACTGTACATTTTTTCAC
TTGTTTTTGGCAATGGGAGGTAGACACAATAAAATAATGCCATGGGAGTCACACT
GAAAGCAATTTTGAGCTTATCTGTCTTATTTATGCTTTGAGTGAATCATCTGTTGA
GGTCTAATGCCTTTACTTGGCCTATTTGCCAGAGAACATCTTAATGCAGCCTGCA
40 TAGTGAAATGGTTATTTTGGAGATCACCGCTCTGTAGCTAACCCTTATAAACTAGG
CTCAGTAAATAAAGCACTCTTATTTTTTGATCTGGCCTATTTTGGCCCTCATTGT
GTAGCCTCAATTAACACATGCATGGTCATGACACCCAGAATTCATGATGGTTTGT
TATAACAACCTCTGCATATTCCAGGTCTGGCAGACAGGTTGCCTGACCCTGCAAT
CCTATCTAGAATGGGCTCATTCTTGTATATTTGACAAATAGGACTGCCTACATTT
45 ATTATTATGAAGGTCGATTGTTGTTGGAAGTGTTTTTTCATGTCATAGATTAGCAA
TTTTCAAATAATTATTTTTTCTCTGAAAATTTTGTGTGTGATTGCACAATAAATAA
TTTTTAGAGAAACAAAGGCTCTTTCTCAGCACATTGATGGGCAACTAGAATTACA
GCAGTTTCAAACCTCTACCATGGATAATGCAAACAAACCGAAGCTACATGCCAA
TGATAGGTGCAAAGAATATTGGCAAAGGTGCTTTACCTTGAGCCATTATTTGTG

TCAGAGAACAAAAGAAACAGAATCAATATATAAAATTCAAAGACTATCTGCAGC
TAGTGTGTTTCTTCTTTACACACATATACACACAGACATCAGAAAATTCTGTTGA
GAGCAGGTTTCATTAAATTTGTAAGATGGCATATTCTAAAGCCTGTGCTACCAGTA
CTAAGAGGGGAAGACTGGCAATTTGCCAAGCACTTGGGGATTATTATAACAATT
5 AACTAGGAGATCAAGAGATAATAATCTCTCCCCAAATTTTCCAATAATAATTGAG
ACTTTTTCTTTGCTTGTTTGTGTAATTCAACCAAAGAATTTCAATACCCATTCAA
ATTGTCCTAGGTCTATCAGAAATTAGGGAAGGTAGTCCTGCTTTATAATAGGAAA
ATGTATTTCTGTATAAGATTTCTTTGCTTTCATTAAAAATGGGATTCATTTAAAAA
TTAATCTTCCCTGTTAGGCTGATTTTCAGATTCTCTAGGAAATCTGTGTAAGTAACC
10 AGAAGACCTTTCAGATGGTTTATTTGCTTTCAGCAGAGAATTTATTTTCATACAGTT
ACTTAAGAGTGTTGATGTCTTGTGAACAGAGATATAAGGAACCATTCTCCATCCT
TCCTTATCATGCTGGGTACAATGCTTCTATGAATATTTCCATGTATTTTGACTGGG
GAGAGGCATGGAGAAGAACTCTCATTGAGGGGCTCCAGGATCCTTCTCCTTGA
GGCTTCTAAATAAAATGGCAGAATTCCTTGCTGTATTGCCATGATGTCACCCTGGCC
15 ATGTGTACTGACTTGAGGAGATCTTGCAACATGGCCATGTGCAAGGCTTTAAGGA
GTGAGAGAGATGTGTACATATCTTAGGAGGGTTATCTATGTTATCTGAGTATATG
TTTGGGTAACCAAATTGGTCTTAAAAATGATGTTAACCCAAGAAGTAGACATCAA
AAATT

20 SEQ ID NO: 455

>6545 BLOOD 228575.9 L29384 g495867 Human (clone pcDNA-alpha1E-1) voltage-

dependent calcium channel alpha-1E-1 subunit mRNA; complete cds. 0

CTTGCATCTTCCTTTTCCCTCTTCCTCCCGCGGGGCCGCACTGGCTTCCCAATTCT
GTCTTGGTTTCTCCATGTGAGAGAAGAGCATGCATCGGAGGGGGGAGCAGCCT
25 CTAGCATTGTGCATCTTCTTCCGTGTCACTTAGCAGGTTGTTGACAGCCCCACACA
TCATGCCTGGCCCAGGCCCCCGCGCCTCCGCCGCCGATAGTGCCCGTTGGGCAT
CTGCCAGCTATGCCGCAGGGGTGGGGCTGAGCCGATGGTGTGGAACGGCCCAG
GCTAGTAGCCACGGCTGCTTCGAAAGTGAGCGTCTCCTCCTCAACACAGTCTGAG
GCGTGAGGAGTCTTCGTGCAGGGCCAAGTAGGGCTCGGAGATGTAGCGCTGTGGG
30 GAGGCATGTTGCCTCTGCTGGGGGTGCGGAGAGTTGGAAGACTCGGTCAGCCAA
GCATTGTTGCTCTCCAGAGCTTGGGAGGTCAGCGGGGAGCCCTCCTCGCTTCCAT
CAGCAGGTGGAGAGATGCTGCCCCGCGTGTGCAATCAGGGAGCTGTAGGAAAGGA
GGGGCCGGGGCTTTGGCGGGACGGGTGGGAGCTGCCGACGACTTCTTCTTGGGG
TGCTGGTGTGAGAGACAGAGGGGATGGAGCTCTCACTTAGGGAACCTGTGCCCT
35 GTCTGTTGGGCGTCTGTGACCTGCCCTCACTGGGTGACCTGGATTGACGGCGCTC
TGGGGACTCCAGTCAGCCTGGGTCCCTCGCTCTTCTGAATTGCAGCGGGAGACA
TCAGGAGAGAGAAGATGCTTTCGCTCTTTTGATCGTCGCCGCTCCCTGCCCCCTG
AGGGGTGAGTGTGAGACTTGTGGCCTGAATCAGAGTTCAGGCGGTGGGCTGACA
GCCGCAAGGAGGAGTGGTAACTCCGGCGACGGGACTTGTAGGTATTTTCACTGCT
40 TCGCTCCATGGAGAATTCCTCCAACCACGAGGAATTTGAACGCTTATCCCGAATA
GTGGAAAATGAACGTCTCATGGAGCTAGGGTCTGTCACCACCAGAGACTGCCGT
TCTTGGAAGTGTCCGTATCGGCGGGGTCCATACAAGCCAAGTGAATATATCCT
GGGGAGAGAGTGGACTCATCGAAGGGTATCCAATCCGGCCACTCAGGCCTGAAA
CGGGGTCTGCTGGAGGTAAGGCAGGGCTTTGGCATTAGCAATGATCTCCTGAG
45 GCAGAGATGAAGGCTCCATGCGCTGGAACATGGGGGCATTTTCTGTTCTCCAG
CTGCTGCCTCTGCTTCTTACCTTACTCTGCTTATAGTAGTCCATGATCATCATTG
CTGCATAGATTTTGCCACAGTCAGGTCAGAGGCTTTGGGCATGGGCACAAGCA
GATCCAGCATCTTCTGGGATAGGTGAGGCCAGATGGCTAGGGTCTCCTTTTGTAG
CTCTGAGTCTAGCTGCTGCCTGTCTGCACCACCTTTGGCAATTTTAATGTCCAGAG

386

CGGCTGCGCCGTTGGCTCTGCCTGTGCCTGGCCCCGGTCCTCAAAGGTCACACAG
 CCTCTCCTCCCCCTGCCTCCTGCTGAGTCGGGTACAGTTTCCATGACAGGGCCTG
 GCCAGCCATGGTGGCTCCCGCTGGCCCAGGGACAAAGGGGTCTCTGGTTGTCCA
 GGGCACTGGATCGGTCCCCCTCCATCCCCCTTGAGGGACCCCCACGGCTGATGCG
 5 CTCTCCTCGAACTTCTCCAGGGCCAGGCCAGGGCCAGGCCCTCAATGGCCCTG
 GGTCGCCGATAAAGGCTGGGGTGGGCATTGAGCGGGTTGAGGGAGCTGAGCGGG
 TTGAGGGGGTTGAGCGGGTTCATGGTCGGCGCCTCCTCTCTGTTGAGGGCCTCCT
 GGCTGGACATCTGCATGTGCTTCCTCAGCTGGCTGGTACGCTGCTCCCACACGGA
 CATGTGGTGCCGGCGCCTCCGCTCCCTCAGGTGGCTGCTGCGTGGCTCCCACATC
 10 GACATGTGGTGTCTTCTCCTTCTGTCTCTTTCGATCGAAGGCATGTTGGGTGCAGA
 CATCGGGCTGACCTCCTTGGCCTTCTGCAGTGCATGTTTCTGGTTGAAGGCCTCTT
 CTTCTCCTGTTTCATCCTTGGTCAGTTCCTGGGCGTTGGCGAGATTATCCACAGCG
 ATAGCCAAGAACACATTCAGTAGCGTGTAGTTGCCAAACAAGGTGAGCACAATG
 AAGTAGATGGCAGACCACATGCCTGAGCTGACCCACCCCTGGGAGCGGATCCCA
 15 TTGTACATCACCTCATTCCAGTCCTCACCCGTCAGGATCTGGAACACAGTCATGA
 TGGCTGCAGGGAAGGTATCAAAATTTGCCGAAGGAGTCCCATCATTAAGTTAA
 ACCTGCCTCCAAATAACTGCATTCTAGGAGAGCAAAGACAACGATGAAGAGGA
 AGAGGAGGAAAAGCAAACCTGATGATAGACTTCATTGAGCTCATCAAGGAGACCA
 CCAAATTCGCTAGGGAAGCCCAATACTTGGTTATTTTAAATATTCTTAGAAGCCG
 20 GAGGGCTCGCAAGACACTGATTCCAAAAGACGTACCAGGTCTGAAGATTGCCCA
 GACCACTTCAAAGATACTGCCCACTGTGACCCCAAAATCAAAGCAGTTGAATGA
 AGAGTGAAAATAAAGGCGAGGCCCCATGCCATACATCTTCAGGGACATCTCCAA
 GAGGAAGAGTCCCAGAAACAGAAATTCTGCATAGTAGAGGAGGTGGGTGAGCG
 ACTGGGGCTGGTTGTGATGGACAATGGCCAGACAGGCAGTGTGAGTGCCACAA
 25 GGCTCAGCACAATCCAGTAAACACCTGGGATTTAACCATGTGGCGAATGGAGA
 TGCGCAGAAGCCTTTCCTTGTGCCGGAATAAGAGACCCCGTCTACCTTTGCACT
 TTTGATACTGGCTCGGGCCAGAGGTGTGCCACAGAGGAGATATCAACACAGTG
 TCATCACTGGAGTCTCGAGTCATGGCCTCTGTCCGGCTCCTCTTGATGGTTGCCCT
 TCGAAGCACTTCTAAGGCGGATGTTCCAGCATTTTTATTTCTTCAGCGAGCATG
 30 ACTTCTCTGCTTTGTCTATCCAGGCACGGTAGCCATTCAGCTCACGCTCAATCTG
 CTGCTGGCGCCGACGCTTCATGAAAGCCCTTCGGTTCTCCACTCTCTCTCTCTT
 TGGCAAATTCCCCGGAAGCACTCCCAGGACTAGGTTGAGAACAAAGAAGGATC
 CAATGATGATGAGGGGGATGAAGTACAGCCAATTCAGGTGGCTCCTAAGGCAT
 CATTGGTATTGTACAGCACAGTGGTCCACCCTTCCATGGTGATGCACTGGAAGAC
 35 AGTCAGCACAGCAAAAAGGATGTTATCAAACCTGGGTGATCCCATCATTGGGGCC
 GATCCAGTCCTTGCATTTCATAACCAGCTGGGCAGCCCTGCACACCACATGGGTGA
 GGGGGGTCAAATCCTTCTAGAATACCTGAATTGTTTCATGAAGCACGCTCGATGTA
 ACTTGCCACTGTAGAACTCCAAACCAATGATAGCAAACATCAGGATGGCAAAGA
 AGAGCAGAAGGCCAATCTGCAGAAGAGGTACCATGGCCTTCATGATGGACTTCA
 40 ACACAATCTGCAGGCTAGGTATCCCTGACACGAGCTTCAAAGGCCGACAGGACAC
 GCACAGCCCGGAGGGTCCTCAGGTCCACGTGAGTATTGAAGTGGGTTCCTGCAGT
 GGCCAGGATGCCACTGAGGACCACGATGAAGTCCATGACATTCCAGCCATTGCG
 GAGGTAAGAGCCCTTATGGAAGATGAACCCAGGGCCACAATTTTGATCCCAGC
 TTCAAAGCAAAAGATCCCAATGAAATAAGGTTCTGTCTTCTCCAGTCTTCGGGAC
 45 ATGGGGGTCTTGTATCCTCAGGAAGATGCTGCTCCAGGGCCAGGACGATGCAG
 TTGGCAATGATGGTGGCCAGGATCATGTACTCAAATGGCGGCCAATCGATGAGC
 TTCTTGGCATATTTCTGACAATGTTATCTTCTCCGAAGATGAACAGGGATCTGTT
 GACGGTGAAACAGTTCTGCCGGACGGGAATGGGGTTGTACAAAGCCATAGTCCG
 CGCCCTCTGTGCTTTCGTCTGCTTGTAGGCGGCCGCTGCCCCGAGGCCGGCACG

GGGGTTCCTTGCCGGTTCCTGCTCTGGTCCGAGTCTCCATCGCCGGACCCTGGCCT
GGCGACCACCGCCTCCCCGAAGCGAGCCATCCTGAGGTTTAAACAGACAGAAGA
CACACAAAGGTGATCGCGGCCGAACACCCGCACACAGCAACAAGCAGAAAGAC
ACACGGAGACTCAGAGCCGCATCCAGACAAGCACGGGGACCACCGCCTCTGGGG
5 AGCTCCGCGAGCTCTTCGGAGAGGCAGCAGCAGC

SEQ ID NO: 456

>6559 BLOOD 404061.1 U21051 g687793 Human G-protein-coupled receptor (GPR4) gene,
complete cds. 0

10 GCGGAGAGAGGTGCCGCCGCCGCCCGTCCAGTCGCCGCGCGCAGGCACTGCA
GTCAGCGGTGAAGTACTTTCATCCCAATCCCTCAGCCCCACCAGGACCAGTCTG
GAGTCCCTCCCCTGCCCCATTGAAATTTCCCTTCCGTCCCCAACTTACCTCTGA
TCTAGACCTTACTCACCTCCTTCCTGTTTCCTAAGACTCCTTCCTGCCGTCCACAG
ACCGAGCCTTTTATCTTTGTCCACCCTGTGCCAGACACCTCCTTTTCCAGAACCTT
15 CTCCTTACTGGTGACCTTACTTATCTCTGTTGCTTTCTGGGGTCTAGGAAATGCC
AGCACTCCCACCCACATTGCCTGAAGTTTCCAACACTCCCTAACTGCGCTGTGTC
CTATCTCAACACTTTCTCATGTATTTCTGTGTCTTCTAGAACATTCCCCCGCCATT
ATTACTTCAATATGGCTACACATACTTCCTAATTGCCCTGCAAACCATCTCCTTCT
CACCATTGCCAGCGATGCTTTCGTCTCCTCCATAAACACTCCCGGAGACCAATT
20 TTTGTGTACCCCCATACTCCCTCGTTGACACACTGACTCCATACATAACCTCCTT
GAAAAACCTCTTTATTAATCTCACCATCCTCCAGACTTCCCTCCTGTCATAATTCC
ATCCCTCCTCCAACTTTTCCCTCTCAAGCTCTGCCCTTCCCAGCCCAGCCCAGCCT
ACCCAACCTCATCTCTTCCCTGTAGAGCACATCCCAGCATGTTCCCCTGAGCCTCC
AAGGAAGGGGCTCAGGGGGGCCCATGGGCTCCGGCTCCCTGTGGCGCCGAGGCG
25 CCCGTGGGCCAGGGGAAGCGCCCCAGAAGCCGAAGTGCCCAACCATGGGCAACCA
CACGTGGGAGGGCTGCCACGTGGACTCGCGCGTGGACCACCTCTTCCGCCATCC
CTCTACATCTTTGTCATCGGCGTGGGGCTGCCCACCAACTGCCTGGCTCTGTGGG
CGGCCTACCGCCAGGTGCAACAGCGCAACGAGCTGGGCGTCTACCTGATGAACC
TCAGCATCGCCGACCTGCTGTACATCTGCACGCTGCCGCTGTGGGTGGACTACTT
30 CCTGCACCACGACAACTGGATCCACGGCCCCGGGTCTGCAAGCTCTTTGGGTTC
ATCTTCTACACCAATATCTACATCAGCATCGCCTTCCCTGTGCTGCATCTCGGTGGA
CCGCTACCTGGCTGTGGCCCACCACTCCGCTTCGCCCGCCTGCGCCGCGTCAAG
ACCGCCGTGGCCGTGAGCTCCGTGGTCTGGGCCACGGAGCTGGGCGCCAACTCG
GCGCCCCGTGTTCCATGACGAGCTCTTCCGAGACCGCTACAACCACACCTTCTGCT
35 TTGAGAAGTTCCCCATGGAAGGCTGGGTGGCCTGGATGAACCTCTATCGGGTGT
CGTGGGCTTCCCTCTTCCCGTGGGCGCTCATGCTGCTGTCGTACCGGGGCATCCTG
CGGGCCGTGCGGGGCAGCGTGTCCACCGAGCGCCAGGAGAAGGCCAAGATCAA
GCGGCTGGCCCTCAGCCTCATCGCCATCGTGCTGGTCTGCTTTGCGCCCTATCAC
GTGCTCTTGCTGTCCCGCAGCGCCATCTACCTGGGCGGCCCTGGGACTGCGGCT
40 TCGAGGAGCGCGTCTTTTCTGCATAACCACAGCTCACTGGCTTTCACCAGCCTCAA
CTGTGTGGCGGACCCCATCCTCTACTGCCTGGTCAACGAGGGGCGCCCGCAGCGAT
GTGGCCAAGGCCCTGCACAACCTGCTCCGCTTTCTGGCCAGCGACAAGCCCCAGG
AGATGGCCAATGCCTCGCTCACCTGGAGACCCCACTCACCTCCAAGAGGAACA
GCACAGCCAAAGCCATGACTGGCAGCTGGGCGGCCACTCCGCCCTCCAGGGGG
45 ACCAGGTGCAGCTGAAGATGCTGCCGCCAGCACAATGAACCCCGAGTGGCACAG
AATCCCCAGTTTTCCCTCTCATCCACAGTCCCTTCTCTCCTGGTCTGGTGTATG
CAAATTGTATGGAAAAAGGGCTGTGTTAATATTCATAAGAATAACAAGAACTTAG
GAAGAGTGAGGTTGGTGTGTCACTGGTCAACCTTTGTGCTCCAGATCCCATCAC
AGTTTGGCGATTGTGGAGGGCCTCCTGAAGGAGGAGATGAGTAAANNNNNNNNNN

SEQ ID NO: 457

>6649 BLOOD 222735.9 J05036 g181193 Human cathepsin E mRNA, complete cds. 0

389

CTCCTCTCTCCAGCTCCACATGCTGTACCTGGATCATTCTGAAGCAAATTCCGAG
CATTACATCATTTTTGTCCATAAATATTTCTAACATCCTTAAATATAACAATCGGAAT
TCAAGCATCTCCCATTTGTCCACAAATGTTTGGCTGTTTTTGTAGTTGGATTGTTT
GTATTAGGATTCAAGCAAGGCCCATATATTGCATTTATTTGAAATGTCTGTAAGT
5 CTCTTTCCATCTACAGAGTTTAGCACATTTGAACGTTGCTGGTTGAAATCCCGAG
GTGTCATTTGACATGGTTCTCTGAACTTATCTTTCCTATAAAATGGTAGTTAGATC
TGGAGGTCTGATTTTGTGGCAAAAATACTTCCTAGGTGGTGGTGGGTACTTCTTG
TTGCATCCTGTCAGGAGGCAGATAATGCTGGTGCCTCTCTATTGGTAATGTTAAG
ACTGCTGGGTGGGTTTGGAGTTCTTGGCTTTAATCATTACATAAAGTTCAGCAT
10 TTT

SEQ ID NO: 458

>6653 BLOOD 416874.3 M15476 g340159 Human pro-urokinase mRNA, complete cds. 0

15 GACCGCAGCCCCGGAGCCCGGGCCAGGGTCCACCTGTCCCCGCAGCGCCGGCTC
GCGCCCTCCTGCCGCAGCCACCGAGCCGCCGTCTAGCGCCCCGACCTCGCCACCA
TGAGAGCCCTGCTGGCGCGCCTGCTTCTCTGCGTCCTGGTCGTGAGCGACTCCAA
AGGCAGCAATGAACTTCATCAAGTTCCATCGAACTGTGACTGTCTAAATGGAGG
AACATGTGTGTCCAACAAGTACTTCTCCAACATTCACTGGTGCAACTGCCCAAAG
AAATTCGGAGGGCAGCACTGTGAAATAGATAAGTCAAAAACCTGCTATGAGGGG
20 AATGGTCACTTTTACCGAGGAAAGGCCAGCACTGACACCATGGGCCGGCCCTGC
CTGCCCTGGAACCTCTGCCACTGTCCTTCAGCAAACGTACCATGCCACAGATCTG
ATGCTCTTCAGCTGGGGCTGGGGGAAACATAATTACTGCAGGAACCCAGACAACG
GGAGGGCGACCCCTGGTGGTATGTGGAGGTGGGCCTAAAGCCGCTTGTCCAAGAGT
GCATGGTGCATGACTGCGGAGATGGAAAAAGCCCTCCTCTCCTCCAGAAGAAT
25 TAAAATTTCAGTGTGGCCAAAAGACTCTGAGGCCCGCTTTAAGATTATTGGGGG
AGAATTCACCACCATCGAGAACCAGCCCTGGTTTGCGGCCATCTACAGGAGGCA
CCGGGGGGGCTCTGTACCTACGTGTGTGGAGGCAGCCTCATCAGCCCTTGCTGG
GTGATCAGCGCCACACACTGCTTCATTGATTACCCAAAGAAGGAGGACTACATC
GTCTACCTGGGTGCTCAAGGCTTAACCTCCAACACGCAAGGGGAGATGAAGTTT
30 GAGGTGGAAAACCTCATCCTACACAAGGACTACAGCGCTGACACGCTTGCTCAC
CACAATGACATTGCCTTGCTGAAGATCCGTTCCAAGGAGGGCAGGTGTGCGCAG
CCATCCCGGACTATACAGACCATCTGCCTGCCCTCGATGTATAACGATCCCCAGT
TTGGCACAAGCTGTGAGATCACTGGCTTTGAAAAAGAGAATTCTACCGACTATCT
CTATCCGGAGCAGCTGAAAATGACTGTTGTGAAGCTGATTTCCACCGGGAGTGT
35 CAGCAGCCCCACTACTACGGCTCTGAAGTCACCACCAAATGCTGTGTGCTGCTG
ACCCACAGTGGAACACAGATTCCTGCCAGGGAGACTCAGGGGGACCCCTCGTCT
GTTCCCTCCAAGGCCGCATGACTTTGACTGGAATTGTGAGCTGGGGCCGTGGATG
TGCCCTGAAGGACAAGCCAGGCGTCTACACGAGAGTCTCACACTTCTTACCCTGG
ATCCGCAGTCACACCAAGGAAGAGAATGGCCTGGCCCTCTGAGGGTCCCCAGGG
40 AGGAAACGGGCACCAACCCGCTTTCTTGCTGGTTGTCATTTTTGCAGTAGAGTCAT
CTCCATCAGCTGTAAGAAGAGACTGGGAAGATAGGCTCTGCACAGATGGATTG
CCTGTGCCACCCACCAGGGCGAACGACAATAGCTTTACCCTCAGGCATAGGCCTG
GGTGCTGGCTGCCCAGACCCCTCTGGCCAGGATGGAGGGGTGGTCTGACTCAA
CATGTTACTGACCAGCAACTTGTCTTTTTCTGGACTGAAGCCTGCAGGAGTTAAA
45 AAGGGCAGGGCATCTCCTGTGCATGGGTGAAGGGAGAGCCAGCTCCCCGACGG
TGGGCATTTGTGAGGCCCATGGTTGAGAAATGAATAATTTCCAATTAGGAAGTG
TAACAGCTGAGGTCTCTTGAGGGAGCTTAGCCAATGTGGGAGCAGCGGTTTGGG
GAGCAGAGACACTAACGACTTCAGGGCAGGGCTCTGATATTCCATGAATGTATC
AGGAAATATATATGTGTGTGTATGTTTGCACACTTGTGTGTGGGCTGTGAGTGTA

AGTGTGAGTAAGAGCTGGTGTCTGATTGTTAAGTCTAAATATTTCTTAAACTGT
 GTGGACTGTGATGCCACACAGAGTGGTCTTTCTGGAGAGGTTATAGGTCACCTCT
 GGGGCCTCTTGGGTCCCCCACGTGACAGTGCCTGGGAATGTATTATTCTGCAGCA
 TGACCTGTGACCAGCACTGTCTCAGTTTCACTTTACATAGATGTCCCTTTCTTGG
 5 CCAGTTATCCCTTCCTTTTAGCCTAGTTCATCCAATCCTCACTGGGTGGGGTGAGG
 ACCACTCCTTACACTGAATATTTATATTTCACTATTTTTATTTATTTTTGTAAATT
 TTAAATAAAAGTGATCAATAAAATGTGATTTTTCTGATGAC

SEQ ID NO: 459

10 >6657 BLOOD 284616.2 D10924 g219868 Human mRNA for HM89. 0
 TGTTTTTATAAAAGTCCGGCCGCGGCAGAACTTCAGTTGTTGGCTGCGGCAGCA
 GGTAGCAAAGTGACGCCGAGGGCCTGAGTGCTCCAGTAGCCACCGCATCTGGAG
 AACCAGCGGTTACCATGGAGGGGATCAGTATATACACTTCAGATAACTACACCG
 AGGAAATGGGCTCAGGGGACTATGACTCCATGAAGGAACCCTGTTTCCGTGAAG
 15 AAAATGCTAATTTCAATAAAATCTTCCTGCCACCATCTACTCCATCATCTTCTTA
 ACTGGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGTTACCAGAAGAAAC
 TGAGAAGCATGACGGACAAGTACAGGCTGCACCTGTCAGTGGCCGACCTCCTCTT
 TGTCATCACGCTTCCCTTCTGGGCAGTTGATGCCGTGGCAAACCTGGTACTTTGGG
 AACTTCCTATGCAAGGCAGTCCATGTCTACACAGTCAACCTCTACAGCAGTG
 20 TCCTCATCCTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATCGTCCACGCCACC
 AACAGTCAGAGGCCAAGGAAGCTGTTGGCTGAAAAGGTGGTCTATGTTGGCGTC
 TGGATCCCTGCCCTCCTGCTGACTATTCCCGACTTCATCTTGGCCAAACGTCAGTGA
 GGCAGATGACAGATATATCTGTGACCGCTTCTACCCGAATGACTTGTGGGTGGTT
 GTGTTCCAGTTTCAGGACATCATGGTTGGCCTTATCCTGCCTGGTATTGTCATCCT
 25 GTCCTGCTATTGCATTATCATCTCCAAGCTGTCACACTCCAAGGGCCACCAGAAG
 CGCAAGGCCCTCAAGACCACAGTCATCCTCATCCTGGCTTTCTTCGCCTGTTGGCT
 GCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGGAAATCATCAAG
 CAAGGGTGTGAGTTTGAGAACACTGTGCACAAGTGGATTTCATCACCGAGGCC
 CTAGCTTTCTTCCACTGTTGTCTGAACCCCATCCTCTATGCTTTCCTTGGAGCCAA
 30 ATTTAAAACCTCTGCCCAGCACGCACTCACCTCTGTGAGCAGAGGGTCCAGCCTC
 AAGATCCTCTCCAAAGGAAGCGAGGTGGACATTCATCTGTTTCCACTGAGTCTG
 AGTCTTCAAGTTTTCACTCCAGCTAACACAGATGTAAAAGACTTTTTTTTATACGA
 TAAATAACTTTTTTTTAAAGTTACACATTTTTTCAGATATAAAAGACTGACCAATATT
 GTACAGTTTTTATTGCTTGTGGATTTTTGTCTTGTGTTTCTTTAGTTTTTGTGAAG
 35 TTTAATTGACTTATTTATATAAATTTTTTTTGTTCATATTGATGTGTGTCTAGGCA
 GGACCTGTGGCCAAGTTCTTAGTTGCTGTATGTCTCGTGGTAGGACTGTAGAAAA
 GGGAACTGAACATTCCAGAGCGTGTAGTGAATCACGTAAAGCTAGAAATGATCC
 CCAGCTGTTTATGCATAGATAATCTCTCCATTCCCGTGGAACGTTTTTCTGTTCT
 TAAGACGTGATTTTGCTGTAGAAGATGGCACTTATAACCAAAGCCCAAAGTGGT
 40 ATAGAAATGCTGGTTTTTTCAGTTTTTCAGGAGTGGGTTGATTTTCAGCACCTACAGT
 GTACAGTCTTGTATTAAGTTGTTAATAAAAGTACATGTTAAACTTAAANAAAAA

SEQ ID NO: 460

>12205 BLOOD gi|2257932|gb|AF004327.1|AF004327 Homo sapiens angiopoietin-2
 mRNA, complete cds
 45 TGGGTTGGTGTTTATCTCCTCCCAGCCTTGAGGGAGGGAACAACACTGTAGGATC
 TGGGGAGAGAGGAACAAAGGACCGTGAAAGCTGCTCTGTAAAAGCTGACACAG
 CCCTCCCAAGTGAGCAGGACTGTTCTTCCCACTGCAATCTGACAGTTTACTGCAT
 GCCTGGAGAGAACACAGCAGTAAAAACCAGGTTTGCTACTGGAAAAAGAGGAA

AGAGAAGACTTTCATTGACGGACCCAGCCATGGCAGCGTAGCAGCCCTGCGTTTC
 AGACGGCAGCAGCTCGGGACTCTGGACGTGTGTTTGCCCTCAAGTTTGCTAAGCT
 GCTGGTTTATTACTGAAGAAAGAATGTGGCAGATTGTTTTCTTTACTCTGAGCTGT
 GATCTTGTCTTGGCCGCAGCCTATAACAACCTTTCGGAAGAGCATGGACAGCATAG
 5 GAAAGAAGCAATATCAGGTCCAGCATGGGTCCCTGCAGCTACACTTTCCTCCTGCC
 AGAGATGGACAACTGCCGCTCTTCCTCCAGCCCCTACGTGTCCAATGCTGTGCAG
 AGGGACGCGCCGCTCGAATACGATGACTCGGTGCAGAGGCTGCAAGTGCTGGAG
 AACATCATGGAAAACAACACTCAGTGGCTAATGAAGCTTGAGAATTATATCCAG
 GACAACATGAAGAAAGAAATGGTAGAGATACAGCAGAATGCAGTACAGAACCA
 10 GACGGCTGTGATGATAGAAATAGGGACAAACCTGTTGAACCAAACAGCTGAGCA
 AACGCGGAAGTTAACTGATGTGGAAGCCCAAGTATTAAATCAGACCACGAGACT
 TGAACCTTCAGCTCTTGGAACACTCCCTCTCGACAAACAAATTGGAAAAACAGATT
 TTGGACCAGACCAGTGAAATAAACAAATTGCAAGATAAGAACAGTTTCCTAGAA
 AAGAAGGTGCTAGCTATGGAAGACAAGCACATCATCCAACCTACAGTCAATAAAA
 15 GAAGAGAAAGATCAGCTACAGGTGTTAGTATCCAAGCAAAATTCCATCATTGAA
 GAACTAGAAAAAAAATAGTGACTGCCACGGTGAATAATTCAGTTCTTCAAAAG
 CAGCAACATGATCTCATGGAGACAGTTAATAACTTACTGACTATGATGTCCACAT
 CAAACTCAGCTAAGGACCCCACTGTTGCTAAAGAAGAACAATCAGCTTCAGAG
 ACTGTGCTGAAGTATTCAAATCAGGACACACCACAAATGGCATCTACACGTTAAC
 20 ATTCCCTAATTCTACAGAAGAGATCAAGGCCTACTGTGACATGGAAGCTGGAGG
 AGGCGGGTGGACAATTATTCAGCGACGTGAGGATGGCAGCGTTGATTTTCAGAG
 GACTTGGAAAGAATATAAAGTGGGATTTGGTAACCCCTCAGGAGAATATTGGCTA
 GGGGAAATGAGTTTGTTCGCAACTGACTAATCAGCAACGCTATGTGCTTAAATAA
 CACCTTAAAGACTGGGAAGGGAATGAGGCTTACTCATTGTATGAACATTTCTATC
 25 TCTCAAGTGAAGAACTCAATTATAGGATTCACCTTAAAGGACTTACAGGGACAG
 CCGGCAAAATAAGCAGCATCAGCCAACCAGGAAATGATTTTAGCACAAAGGATG
 GAGACAACGACAAATGTATTTGCAAATGTTCAAAATGCTAACAGGAGGCTGGT
 GGTTTGATGCATGTGGTCCTTCCAACCTTGAACGGAATGTACTATCCACAGAGGCA
 GAACACAAATAAGTTCAACGGCATTAAATGGTACTACTGGAAAGGCTCAGGCTA
 30 TTCGCTCAAGGCCACAACCATGATGATCCGACCAGCAGATTTCTAAACATCCCAG
 TCCACCTGAGGAACTGTCTCGAACTATTTTCAAAGACTTAAGCCCAGTGCCTGA
 AAGTCACGGCTGCGCACTGTGTCCTCTTCCACCACAGAGGGCGTGTGCTCGGTGC
 TGACGGGACCCACATGCTCCAGATTAGAGCCTGTAAACTTTATCACTTAACTTG
 CATCACTTAACGGACCAAAGCAAGACCCTAAACATCCATAATTGTGATTAGACA
 35 GAACACCTATGCAAAGATGAACCCGAGGCTGAGAATCAGACTGACAGTTTACAG
 ACGCTGCTGTCACAACCAAGAATGTTATGTGCAAGTTTATCAGTAAATAACTGGA
 AAACAGAACACTTATGTTATAACAATACAGATCATCTTGGAAGTGCATTCTTCTGA
 GCACTGTTTATACACTGTGTAAATACCCATATGTCCT

40 SEQ ID NO: 461

>12266 BLOOD Hs.90786 gn|UG|Hs#S1368546 Homo sapiens multidrug resistance-
 associated protein 3B (MRP3) mRNA, complete cds /cds=(36,1568) /gb=AF085692
 /gi=4106443 /ug=Hs.90786 /len=5346

CCGCGCTCGCCTTCCTTGCAGCCGCGCCTCGGCCCCATGGACGCCCTGTGCGGTT
 45 CCGGGGAGCTCGGCTCCAAGTTCTGGGACTCCAACCTGTCTGTGCACACAGAAA
 ACCCGGACCTCACTCCCTGCTTCCAGAACTCCCTGCTGGCCTGGGTGCCCTGCAT
 CTACCTGTGGGTGCGCCCTGCCCTGCTACTTGCTCTACCTGCGGCACCATTGTGCTG
 GCTACATCATCCTCTCCACCTGTCCAAGCTCAAGATGGTCCTGGGTGTCCTGCT
 GTGGTGCGTCTCCTGGGCGGACCTTTTTTACTCCTTCCATGGCCTGGTCCATGGCC

GGGCCCCCTGCCCTGTTTTCTTTGTCACCCCCTTGGTGGTGGGGGTACCATGCTG
CTGGCCACCCTGCTGATACAGTATGAGCGGCTGCAGGGCGTACAGTCTTCGGGG
GTCCTCATTATCTTCTGGTTCTGTGTGGTCTGCGCCATCGTCCCATTCCGCTC
CAAGATCCTTTTAGCCAAGGCAGAGGGTGAGATCTCAGACCCCTTCCGCTTCACC
5 ACCTTCTACATCCACTTTGCCCTGGTACTCTCTGCCCTCATCTTGGCCTGCTTCAG
GGAGAAACCTCCATTTTTCTCCGCAAAGAATGTCGACCCTAACCCCTACCCTGAG
ACCAGCGCTGGCTTTCTCTCCCGCCTGTTTTCTGGTGGTTCACAAAGCTGCTAAA
CCCTGACCCTCTGCGGGGGCTGCCTGCCGGGCTTCACCTCCCCCAGGATGGCCAT
CTATGGCTACCGGCATCCCCTGGAGGAGAAGGACCTCTGGTCCCTAAAGGAAGA
10 GGACAGATCCCAGATGGTGGTGCAGCAGCTGCTGGAGGCATGGAGGAAGCAGG
AAAAGCAGACGGCACGACACAAGGCTTCAGCAGCACCTGGGAAAAATGCCTCCG
GCGAGGACGAGGTGCTGCTGGGTGCCCGGCCAGGCCCCGGAAGCCCTCCTTCC
TGAAGGCCCTGCTGGCCACCTTCGGCTCCAGCTTCCTCATCAGTGCCTGCTTCAA
GCTTATCCAGGACCTGCTCTCCTTCATCAATCCACAGCTGCTCAGCATCCTGATCA
15 GGTTCATCTCCAACCCCATGGCCCCCTCCTGGTGGGGCTTCCTGGTGGCTGGGCT
GATGTTCTGTGCTCCATGATGCAGTCGCTGATCTTACAACACTATTACCACTAC
ATCTTTGTGACTGGGGTGAAGTTTCGTAAGTGGGATCATGGGTGTCATCTACAGGA
AGGCTCTGGTTATCACCAACTCAGTCAAACGTGCGTCCACTGTGGGGGAAATTGT
CAACCTCATGTGAGTGGATGCCAGCGCTTCATGGACCTTGCCCCCTCCTCAAT
20 CTGCTGTGGTCAGCACCCCTGCAGATCATCCTGGCGATCTACTTCCTCTGGCAGA
ACCTAGGTCCCTCTGTCTGGCTGGAGTCGCTTTCATGGTCTTGCTGATTCCACTC
AAGGAGCTGTGGCCGTGAAGATGCGCGCCTTCCAGGTAAAGCAAATGAAATTG
AAGGAGCTCGCGCATCAAGCTGATGAGTGAGATCCTGGACGGCATCAAGGTGCTG
AAGCTGTACGCTGGGAGGCCAGCTTCCTGAAGCAGGTGGAGGGCATCAGGCAG
25 GGTGAGCCCCAGCTGCTGCGCACGGCGGCTACCTCCACACCACAACCACCTTCA
CCTGGATGTGCAGCCCCTTCCTGGTGACCCTGATCACCTCTGGGTGTACGTGTA
CGTGGACCCAAACAATGTGCTGGACGCCGAGAAGGCCTTTGTGTCTGTGTCCTTG
TTAATATCTTAAGACTTCCCCTCAACATGCTGCCCCAGTTAATCAGCAACCTGA
CTCAGGCCAGTGTGTCTCTGAAACGGATCCAGCAATTCCTGAGCCAAGAGGAAC
30 TTGACCCCCAGAGTGTGGAAAGAAAGACCATCTCCCCAGGCTATGCCATCACCAT
ACACAGTGGCACCTTCACCTGGGCCCAGGACCTGCCCCCACTCTGCACAGCCTA
GACATCCAGGTCCCGAAAGGGGCACTGGTGGCCGTGGTGGGGCCTGTGGGCTGT
GGGAAGTCCTCCCTGGTGTCTGCCCTGCTGGGAGAGATGGAGAAGCTAGAAGGC
AAAGTGCACATGAAGGGCTCCGTGGCCTATGTGCCCCAGCAGGCATGGATCCAG
35 AACTGCACTCTTCAGGAAAACGTGCTTTTCGGCAAAGCCCTGAACCCCAAGCGCT
ACCAGCAGACTCTGGAGGCCTGTGCCTTGCTAGCTGACCTGGAGATGCTGCCTGG
TGGGGATCAGACAGAGATTGGAGAGAAGGGCATTAACCTGTCTGGGGGCCAGCG
GCAGCGGGTCAGTCTGGCTCGAGCTGTTTACAGTGATGCCGATATTTTCTTGCTG
GATGACCCACTGTCCGCGGTGGACTCTCATGTGGCCAAGCACATCTTTGACCACG
40 TCATCGGGCCAGAAGGCGTGCTGGCAGGCAAGACGCGAGTGCTGGTGACGCACG
GCATTAGCTTCCTGCCCCAGACAGACTTCATCATTGTGCTAGCTGATGGACAGGT
GTCTGAGATGGGCCCCGTACCCAGCCCTGCTGCAGCGCAACGGCTCCTTTGCCAAC
TTTCTCTGCAACTATGCCCCGATGAGGACCAAGGGCACCTGGAGGACAGCTGG
ACCGCGTTGGAAGGTGCAGAGGATAAGGAGGCACTGCTGATTGAAGACACACTC
45 AGCAACCACACGGATCTGACAGACAATGATCCAGTCACCTATGTGGTCCAGAAG
CAGTTTATGAGACAGCTGAGTGCCCTGTCTCAGATGGGGAGGGACAGGGTCCG
CCTGTACCCCGGAGGCACCTGGGTCCATCAGAGAAGGTGCAGGTGACAGAGGCG
AAGGCAGATGGGGCACTGACCCAGGAGGAGAAAGCAGCCATTGGCACTGTGGA
GCTCAGTGTGTTCTGGGATTATGCCAAGGCCGTGGGGCTCTGTACCACGCTGGCC

ATCTGTCTCCTGTATGTGGGTCAAAGTGCGGCTGCCATTGGAGCCAATGTGTGGC
 TCAGTGCCTGGACAAATGATGCCATGGCAGACAGTAGACAGAACAACACTTCCC
 TGAGGCTGGGCGTCTATGCTGCTTTAGGAATTCTGCAAGGGTTCTTGGTGATGCT
 GGCAGCCATGGCCATGGCAGCGGGTGGCATCCAGGCTGCCCCTGTGTTGCACCA
 5 GGCAGTGTGCACAACAAGATACGCTCGCCACAGTCCTTCTTTGACACCACACCA
 TCAGGCCGCATCCTGAACTGCTTCTCCAAGGACATCTATGTCGTTGATGAGGTTCT
 TGGCCCCTGTATCCTCATGCTGCTCAATTCTTCTTCAACGCCATCTCCACTCTT
 GTGGTCATCATGGCCAGCACGCCGCTCTTCACTGTGGTCATCCTGCCCCTGGCTG
 TGCTCTACACCTTAGTGCAGCGCTTCTATGCAGCCACATCACGGCAACTGAAGCG
 10 GCTGGAATCAGTCAGCCGCTCACCTATCTACTCCCACTTTTCGGAGACAGTGACT
 GGTGCCAGTGTATCCGGGCTACAACCGCAGCCGGGATTTTGAGATCATCAGTG
 ATACTAAGGTGGATGCCAACCAGAGAAGCTGCTACCCCTACATCATCTCCAACCG
 GTCAGAAGCCGCTCCCTCGCTCCCTGCTCCTCCAGGAATCCCAGCAGGCTCTC
 TGGTGTTCAGGGTCTTGTCCCTCCTTTCCCCTAAGCAGAAAAGTGGCCCTGCCCT
 15 GCCCTGCCCATTTCTCCTCATCTGATCCCCCATAGGTGGCTGAGCATCGGAG
 TGGAGTTCGTGGGGAAGTGCCTGGTGTCTTTGCTGCACTATTTGCCGTATCGG
 GAGGAGCAGCCTGAACCCGGGGCTGGTGGGCTTTCTGTGTCTACTCCTTGCA
 GTGACATTTGCTCTGAACTGGATGATACGAATGATGTCAGATTTGGAATCTAACA
 TCGTGGCTGTGGAGAGGGTCAAGGAGTACTCCAAGACAGAGACAGAGGCGCCCT
 20 GGGTGGTGAAGGCAGCCGCCCTCCCGAAGGTTGGCCCCACGTGGGGAGGTGG
 AGTTCGGAATTATTCTGTGCGCTACCGGCCGGGCTAGACCTGGTGCTGAGAGA
 CCTGAGTGTGCATGTGCACGGTGGCGAGAAGGTGGGGATCGTGGGCGCGCACTGG
 GGCTGGCAAGTCTTCCATGACCCCTTGCTGTTCCGCGATCCTGGAGGCGGCAAAG
 GGTGAATCCGCATTGATGGCCTCAATGTGGCAGACATCGGCCTCCATGACCTGC
 25 GCTCTCAGCTGACCATCATCCCGCAGGACCCCATCCTGTTCTCGGGGACCCTGCG
 CATGAACCTGGACCCCTTCGGCAGCTACTCAGAGGAGGACATTTGGTGGGCTTTG
 GAGCTGTCCACCTGCACACGTTTGTGAGCTCCCAGCCGGCAGGCCTGGACTTCC
 AGTGCTCAGAGGGCGGGGAGAATCTCAGCGTGGGCCAGAGGCAGCTCGTGTGCC
 TGGCCCGAGCCCTGCTCCGCAAGAGCCGCATCCTGGTTTTAGACGAGGCCACAGC
 30 TGCCATCGACCTGGAGACTGACAACCTCATCCAGGCTACCATCCGCACCCAGTTT
 GATACCTGCACTGTCTGACCATCGCACACCGGCTTAACACTATCATGGACTACA
 CCAGGGTCCTGGTCCTGGACAAAGGAGTAGTAGCTGAATTTGATTCTCCAGCCAA
 CCTCATTGCAGCTAGAGGCATCTTCTACGGGATGGCCAGAGATGCTGGACTTGCC
 TAAAATATATTCCTGAGATTTCTCCTGGCCTTCTCCTGGTTTTTCATCAGGAAGGAA
 35 ATGACACCAAATATGTCCGCAGAATGGACTTGATAGCAAACACTGGGGGCACCT
 TAAGATTTTGCACCTGTAAAGTGCCTTACAGGGTAACTGTGCTGAATGCTTTAGA
 TGAGGAAATGATCCCCAAGTGGTGAATGACACGCCTAAGGTCACAGCTAGTTTG
 AGCCAGTTAGACTAGTCCCCCGGTCTCCCGATTCCCAACTGAGTGTTATTTGCAC
 ACTGCACTGTTTTCAAATAACGATTTTATGAAATGACCTCTGTCCTCCCTCTGATT
 40 TTTTCATATTTTCTAAAGTTTCGTTTCTGTTTTTAATAAAAAGCTTTTCTCCTG
 GAACAGAAGACAGCTGCTGGGTGAGGCCACCCCTAGGAACTCAGTCCTGTACTC
 TGGGGTGTGCTGCTGAATCCATTAATAAATGGGAGTACTGATGAAATAAACTACA
 TGGTCAACAGTAAAAAAAAAAAAAAAAAAAAA

45 SEQ ID NO: 462

>13258 BLOOD 411233.5 D10995 g219678 Human gene for serotonin 1B receptor,
complete cds. 0

GAGCTCCGGCGCGAGGCGCGGCGCAGCGCTGCTCCTAGACTTCACCCACCCAG
CTCTGGCGGCGCGTGCAGCCCCCAAAGTGCCCCAGCTTGGGGCGAGGGGTGG

GAATGCAAGATCTCGGGACCTCTCGCTGGCCTGCAAGCTTTGGTCTCTACACCTA
GGAAACTCCTGTGGGGCAAAGTCTGCAGATCCAAAAGCGTCCAGGTTAGGAGACG
CTCAGCCTCAAGCAACTGGGGTAAGAGATCCCATTGTTGGTCAAAGCCTTCTCCTCA
AGCAGTACTTCACCCTCCTGCACTAGACGCCTCCAGGGAGCTGGAGCGGAGCAG
5 GGCTCGGTGGGGCCAGCTCTTAGCAACCCAGGTCTAAGACCCGGTGTGGAGAGGA
ACAACCACAGACGCGGCGGCTTAGCTAGGCGCTCTGGAAGTGCAGGGGAGGCGC
CCGCCTGCCTTGCGTGCCGCACCCATGACCTCTAGTTTCAGCTGTGAACCTGGGC
GGAGGAATAATTGAGGAACTCACGGAACCTATCAACTGGGGACAAACCTGCGATC
GCCACGGTCTTCCGCCCTCTCCTTCGTCCGCTCCATGCCCAAGAGCTGCGCTCCG
10 GAGCTGGGGCGAGGAGAGCCATGGAGGAACCGGGTGCTCAGTGCGCTCCACCGC
CGCCCGCGGGCTCCGAGACCTGGGTTCCTCAAGCCAACTTATCCTCTGCTCCCTC
CCAAAAGTGCAGCGCCAAGGACTACATTTACCAGGACTCCATCTCCCTACCCTGG
AAAGTACTGCTGGTTATGCTATTGGCGCTCATCACCTTGGCCACCACGCTCTCCA
ATGCCTTTGTGATTGCCACAGTGTACCGGACCCGGAACTGCACACCCCGGCTAA
15 CTACCTGATCGCCTCTCTGGCGGTACCGACCTGCTTGTGTCCATCCTGGTGATGC
CCATCAGCACCATGTACACTGTCACCGGCCGCTGGACACTGGGGCCAGGTGGTCTG
TGACTTCTGGCTGTGCTCGGACATCACTTGTGCACTGCCTCCATCCTGCACCTCT
GTGTCATCGCCCTGGACCGCTACTGGGCCATCACGGACGCCGTGGAGTACTCAGC
TAAAAGGACTCCCAAGAGGGCGGGCGGTATGATCGCGCTGGTGTGGGTCTTCTCC
20 ATCTCTATCTCGCTGCCGCCCTTCTTCTGGCGTCAGGCTAAGGCCGAAGAGGAGG
TGTCGGAATGCGTGGTGAACACCGACCACATCCTCTACACGGTCTACTCCACGGT
GGGTGCTTTCTACTTCCCCACCCTGCTGCTCATGGCCCTCTATGGCCGCTATCTAGC
TAGAAGCCCGCTCCCGGATTCTTGAAACAGACGCCCAACAGGACCGGCAAGCGCT
TGACCCGAGCCAGCTGATAACCGACTCCCGGGGTCCACGTCTCTGGTCACTCTC
25 TATTAAGTTCGCGGGTTCCCGACGTGCCAGCGAATCCGGATCTCCTGTGTATGTG
AACCAAGTCAAAGTGCAGTCTCCGACGCCCTGCTGGAAAAGAAGAACTCATG
GCCGCTAGGGAGCGCAAAGGCCACCAAGACCCTAGGGATCATTGTTGGGAGCCTTT
ATTGTGTGTTGGCTACCCTTCTTCATCATCTCCCTAGTGATGCCTATCTGCAAAGA
TGCCTGCTGGTTCCACCTAGCCATCTTTGACTTCTTCACATGGCTGGGCTATCTCA
30 ACTCCCTCATCAACCCCATATCTATAACCATGTCCAATGAGGACTTTAAACAAGC
ATTCCATAAACTGATACGTTTTAAGTGCACAAGTTGACTTGCCGTTTGCAGTGGG
GTCGCCTAAGCGACCTTTGGGGACCAAGTTGTGTCTGGTTCCACAGGTAGGTCGA
ATCTTCTTTCGCGGTTTCTGGGTCCCAGCGAGGCTCTCTCCTGGGCAAGGGCA
ATGGATCCTGAGAAGCCAGAATAGTCCTGAGAGAGAGCTCTGAAAGGAGAAGTG
35 TTGAAACTAAATGTAGAGCTTCCCTGCCAGGAGGAGGCTCACTTCCTCCCTCA
AGCCCCGGGCTCAGCACTGACCCTGCGGTAGCCAATCCCAAAGGGGGTTGCAAC
TTTTAAAAATTGATAATGGAAGGGAATCCCTGCCCTGCTTTGGTATCGTGGATAA
TGCCCACTAGAAGCAGTGTACTTGTAAATTGTTGTCTGAAGCCTGTCTGAGACAGA
TCTACATACAGCCTGGCAGTACTTGAAGTACGCTTAATGCCCTGTGTTTTTGG
40 GGGGAGAACTTTGTGTTACAGCTTAATTTAAGAACAGTTACTTTGGCATCATTCA
GTCTTCACTTTTGTCTATTTAAACTTGGTTGGAGAACTTGTGGATTGTTGCTT
CAAACCCTATGTGTGGCTTGGATGGCGCAGAGAAACCTTGAAGAGTTAACAGCA
AAATTCTGATGCTGAGATCTCTATTTTTATTATACTTGAAACTATATGGGGGTGG
GTGGGTGGGAATGGGAGATGAGGAGTGTTAAACTGAGAATCAACACCTATGATT
45 GTTTGTTTTCTGCAGATTTACAATTTTGAATTCCTGTTTAGCGATTGTCAAGCCA
CAACTCTAACAACAAACCATATGTGTGCTAGTGCCAAAGTCTGCAGACTGCTT
TATTTTTCTCTTAATTTTCATGTACCTGTCACTTTACACATTTAAATCCCCATAAT
GAAGGGTATGATGGGTGACTCAGCCACACTGCTGCTATATTTCTTACTAATGCA
ATTGGTAAAACCGATTAGTATTGGAAATATACTGTTTCTTAACAAGAAAAGTGTC

TTTATTTCTTATCCAATTTAGTGAGATGTGAAGGAGACTGATGACATGGGGATAG
 TTCTTACACAATTGAGGAATGGGGTGGGGGCAATAGGAGGATGTATATTTTGACT
 TGTAACAAAAATCTTAAAGTGCATGAACTTTTATCTGATAGTCATTTGCACTCTC
 CTTCCCATCTGTGATTCCCTTGTGTGCTAACATATAAAGAAACCAAGAGAACTATC
 5 TTCCTTCTCCAGAAACCTTAAAAATACAGTTAAGGGCCCTAAAAACGATATTGAA
 AAGAAAATAAACTTGTTTCTNNNNNNNNNNNNNNNNNNNNNNNNNTGGGCAG
 GAGAAAAGATTGCTAGAAAATGACATATAAGAAGCTTTAGAAAAGCTT

SEQ ID NO: 463

10 >13306 BLOOD 1096917.19 K01500 g177808 Human alpha-1-antichymotrypsin (AACT)
 mRNA, complete cds. 0
 GCTAGATGTGGTGGCACACGTCTGTAATACCAGCTGCTGGTATTACAGACGTGTG
 CTACATCCAGCTCCCTGAGGACTGAGTGGGCGGAGGCTGAAGAGTTGAGAATGG
 AGAGAATGTTACCTCTCCTGGCTCTGGGGCTCTTGGCGGCTGGGTTCTGCCCTGC
 15 TGTCTCTGCCACCCTAACAGCCCACTTGACGAGGAGAATCTGACCCAGGAGAA
 CCAAGACCGAGGGACACACGTGGACCTCGGATTAGCCTCCGCCAACGTGGACTT
 CGCTTTCAGCCTGTACAAGCAGTTAGTCCTGAAGGCCCTGATAAGAATGTCATC
 TTCTCCCCACTGAGCATCTCCACCGCCTTGGCCTTCCTGTCTCTGGGGGCCATAA
 TACCACCCTGACAGAGATTCTCAAAGGCCTCAAGTTCAACCTCACGGAGACTTCT
 20 GAGGCAGAAATTCACCAGAGCTTCCAGCACCTCCTGCGCACCTCAATCAGTCCA
 GCGATGAGCTGCAGCTGAGTATGGGAAATGCCATGTTTGTCAAAGAGCAACTCA
 GTCTGCTGGACAGGTTACCGGAGGATGCCAAGAGGCTGTATGGCTCCGAGGCCT
 TTGCCACTGACTTTCAGGAGCTCAGCTGCAGCTAAGAAGCTCATCAACGACTACGT
 GAAGAATGGAAGTAGGGGGAAATCACAGATCTGATCAAGGACCTTGACTCGCA
 25 GACAATGATGGTCCTGGTGAATTACATCTTCTTTAAAGCCAAATGGGAGATGCCC
 TTTGACCCCCAAGATACTCATCAGTCAAGGTTCTACTTGAGCAAGAAAAAGTGGG
 TAATGGTGCCCATGATGAGTTTGCATCACCTGACTATACCTTACTTCCGGGACGA
 GGAGCTGTCTGCACCGTGGTGGAGCTGAAGTACACAGGCAATGCCAGCGCACT
 CTTTCATCCTCCCTGATCAAGACAAGATGGAGGAAGTGGAAGCCATGCTGCTCCCA
 30 GAGACCCTGAAGCGGTGGAGAGACTCTCTGGAGTTCAGAGAGATAGGTGAGCTC
 TACCTGCCAAAGTTTTCCATCTCGAGGGACTATAACCTGAACGACATACTTCTCC
 AGCTGGGCATTGAGGAAGCCTTACCAGCAAGGCTGACCTGTCAGGGATCACAG
 GGGCCAGGAACCTAGCAGTCTCCAGGTGGTCCATAAGGCTGTGCTTGATGTATT
 TGAGGAGGGCACAGAAGCATCTGCTGCCACAGCAGTCAAAATCACCCCTCCTTTCT
 35 GCATTAGTGGAGACAAGGACCATTGTGCGTTTCAACAGGCCCTTCTGATGATCA
 TTGTCCCTACAGACACCCAGAACATCTTCTTCATGAGCAAAGTCACCAATCCCAA
 GCAAGCCTAGAGCTTGCCATCAAGCAGTGGGGCTCTCAGTAAGGAACTTGGAAT
 GCAAGCTGGATGCCTGGGTCTCTGGGCACAGCCTGGCCCCCTGTGCACCGAGTGGC
 CATGGCATGTGTGGCCCTGTCTGCTTATCCTTGAAGGTGACAGCGATTCCCTGT
 40 GTAGCTCTCATATGCACAGGGGCCCATGGACTCTTCAGTCTGGAGGGTCTGGGC
 CTCCTGACAGCAATAAATAATTCG

SEQ ID NO: 464

>13478 BLOOD 233142.9 D79986 g1136389 Human mRNA for KIAA0164 gene, complete
 cds. 0
 45 GTGACTCTGCTGACCTTCGGCATGACATTGATCGCCGTAGAAAAGAAAGAAGTA
 AAGAACGGGGAGATTCCAAGGGCTCCAGGGAATCCAGTGGATCAAGAAAGCAG
 GAAAAAACTCCAAAAGATTACAAGGAATACAAATCTTACAAAGATGACAGTAAA
 CATAAAAGAGAGCAAGATCATTCTCGATCTTCATCCTCTTCAGCATCACCTTCTC

TCCCAGTTCTCGAGAAGAAAAGGAGAGTAAGAAGGAAAGAGAAGAAGAATTTA
AAACTCACCATGAAATGAAAGAATACTCAGGCTTTGCAGGAGTTAGCCGACCAC
GAGGAACCTTTCATGACGACAGAGATGATGGTGTGGATTATTGGGCCAAAAGAG
GAAGAGGTCGTGGTACTTTTCAACGTGGCAGAGGGCGCTTTAACTTCAAAAAATC
5 AGGTAGCAGTCCTAAATGGACTCATGACAAATACCAAGGGGATGGGATTGTTGA
AGATGAAGAAGAGACCATGGAAAATAATGAAGAAAAGAAGGACAGACGCAAGG
AAGAAAAGGAATAATAAATATGAAGTAAGATTACAACAGAGCAGAACTTGCACC
CACCATTTTTTTTACCTGATTTTGGTTTTTCAAATAAGAATGTAAGCATTTTACTTA
AATTTTACTGTTTGCAAGTAGTCTATAGAAATTTGGTTTTAAGTCTTCAAATATCT
10 TGAGAAATAGTAGACTGTATGTTGAAAATTGTACTGAAATAAAGTAGAAAATTG
TTACGTACCATATTTGTAACATCAACTTTTAAAACCTTTTAAACGTTTTTGTTACAT
GCATTGTAATTCTGCTTTGTCTATAAGATATGGTCAAGTACAGCTCTGTGAAAGT
TCTGATTCTCTTCCCTCCCTGTTTGTCAATGTTTTATTCTGAAGTAAACGTTAGCTC
TACATATAAATCCTGGAACAGAAATTGTTTATAGAGACTACACTAATTATTTTAA
15 CTGTATACATCTGTTTAATTTGAACACACTACATCGTAGGGTGACTGATTTTTGAA
GTATACCACAGACAAAAAGTTGTTACTATGGTAAACTAAGCTAGTTTAACTTTG
AGCAAATGCTTAAGAAGGAATTAAGGCTTTGCCAATAGCTAAAAAG
TACAAGCTATTAATAATCAGATTGAAAAGTTTTGAGAAAATGTTATTTTTACTGA
AAGCAAGCAGTGGCCTATAAAGAACATTCTTAGGAGCCTTTTCTATTTGCGTTCA
20 AAAGTGTGTGTTCTTTCTATTCTTATTTGATAGTTTGAGTCATGGTCTTAGATA
TTAGCTATTTGTGAGAGGAACTGGTTTTGTAACAATACTGCAAATAGAAACCCCA
TTTCTACTGAACATCCTAGTTTTTAAACAGAAGAAAACCTGTAATCCTGGGGTTGG
TATGTAGGAGGTCTATCCTGCAGAAATAAGTTGATACATTAGTACCTGATTTGATA
TCTTACATATTTATTTGAGCTGAACATTAGTTTGTAGTGTAACATATTAGTAAAAAT
25 AGAGAAACACAGCATACTGTTTCTTAATAGTATTTTAAAAAAATTGTTTTTCAA
TGTCACCAATAAAAAGTTTTTGGCAGGAAGCTTGTTGCGGCATTGATCTAACCTTTT
TCCCCCCCATTTCAGTTGCAGTTTTTGTAGAATGGCTTTTTCTTTTCTCTTAAGA
GTTCTATTCTTCAGGTAGATAATTTTTCAAATGTGAATTATCTTTTGTGTCTATATT
GATAGCTCTTAAAGGAGTGAAAATCTAAAATAGTAAATTTCAATGTAAAGTGTCT
30 GCTTTATGGGCATATATAAAAGTAGACACATTTTCATTTGTTAATTTAGTTGTGTGT
GTGTGTTAAAAGGAGCTAATGCTTATTCTGTTAATGTAAACTTTTTGAAGATCTTA
AGTGTATTGCTCTTTTCATCTTAAACACTTTTCGAGGATTTGCAGTGCGTCTAGCACC
TAGATTACAGCCAGGAACATTGGTTAAGAAGCTGTTGGAAACAAAAGCA
AACTCAACATATGTGATGTTTATGGCCCTCAGATCCTTAGTATTGTGTGATTTTCC
35 CCCGTTAACATGTCTTTCTAAAATTGTCTATTAAGCAGAGGAAATACCTGCCAA
AGGAAGTATGTATTGCATTAATCAGGGCATAACTAATATTCTCCTGTTCAGAATA
ATACTTATTTACGTGTGAAAGCAACATGGATGTGATTCCCAACACAGAATTTTCA
TGACCCTTTTATTGTATACAAATAAATACCATAACAGTTACTTGGTTAGACATCA
AATCTGTGTGCATGACTATGTGCTTATCCACTTAAGACAATAGGTAAAAGGGGAT
40 CTGAGAAATTATGTAATAGGGAGTGGGAATAAACTACTTAATTCCTGTGGGCA
GGTTATATTTTAAAGTTCAAATGCATTGCTTTAACCTTTGGTTACTTTTATTCTGTTA
AACAGAATTGAAGAAAGAGTATTATACCAGAGTGTAGTAGGCTAGGGTGATTGT
AAGAACTCTGTAATAGAATGTCATTGTGGATGTTACCTTTTTTCAGATCCAAGCAT
ATAAAAAGCCTGTATATTTTTTAAAAACACATCTTAACTCCACGCTTTACGATATT
45 ATAAAAGTTGAATGGTTCCTCTTGGTAAGGATATTTGCTTACAAGTGCTAGGAAA
TAACTCACTGATACCTGCGTTAACATACTTTGTTTTGCCTAGAGAGGGGCAATAA
AAATGAACCAAGGATATTTCCAGAAAGGATTAAGAAAGCTGTTTAAAGAGGCC
ATGACTCTTTAGGTGTGTATGTGTACCTTTCAGCATCCTAGGAATTTTTATACTAA
AAGCAAAATGTTTTTTCCAGTTAGTCTTCTTCAAGGAATTACTATTGTTCTTTTG

TCACAGGTAAAATCAGTGTTGGGAATTATAATTTGAGAAAAATATTACCCAGTAA
 CATTGAATGTAGATGGCTAAACGATTCTTACTCAGTGTGATGTATAATGATGCAA
 CAGGGACCCTTGTAATTGTCATACGCCAATAAAATGTCACAAGTAATAACTGCT
 GTTGTGTTGTTTACCTGTGTCTATTTACACACATCTTATTTCTGTGGCCTATTTTAGAA
 5 TATCAGCGCATCTGTTAGGAAGATTACTGGTGTGGTAAGGCTTGATAAATGCTTT
 ATAAACTCCCTCAAACCTTTCTTTACTGTTTTTTGTTTTGTCTTGTTTTTGTTTTG
 TTTTTGTTTTGTTTTGTTTTGTTTTCCCTTGCTCTCCCTGGGAAAATGGGAAATTTTAC
 AGTTGGTAAATCTAAGCCAAAATTATTTTGAATAAAGGAATTCTGGATGTCCAG
 TTTAGTCCTCGTTTTCTTACGTTAATCTGGGACCTTATCACCCATAATATGGTGAT
 10 TACTTCTCTTTCTAAAAACATAGTAGCTAGTAAATAAGTAAAAAGAATTGTCTTT
 TCATTCACTTTAAGTAAGATGTGGTATAATTCTTACCATGTGCCATCCTGTCAGTT
 TTAACAAAGCATTTTTCACAGAAATTTGTGTACTAAGACAAACTGACACATTTTGA
 CTCATACAAATGGCAAATTAGTCCTTAAAAATTCTGTGAGAGAAATAACTCTGTG
 TGTACATACATATGCATGTAAAGTGTTGTGTAAGATCATTGGTAGCTTAATTATA
 15 CTGGATAATTGTAATGTTATATACAAATTTCTTATATAAAAGTATGCTGCATT

SEQ ID NO: 465

>13519 BLOOD gi|894352|gb|H25229.1|H25229 y|45d06.s1 Soares breast 3NbHBst Homo
 sapiens cDNA clone IMAGE:161195 3' similar to contains LTR3 repetitive element ;, mRNA
 20 sequence

ATTCTTTAAAAAATTAGTTGCTTTTTATACAGCTATACAAAGTTCTTAATGTTTCT
 TTGGCAATGGAATATAATGGAATTTTACAACCTATATAAAAAAGTTACCTTTGCCT
 AAGAAACAGTATTTACTGTGTGTACATAGTTGACTGACAAAATTCTCTACCATCC
 AGCAGCCTAATTAATTGACGAAATAAGCTACCTCATATTACAGGATTCCCCAAAA
 25 GAAAGGNGGAAAAAGNCACACACATACACACACACACACACACACACACACAC
 ACACACACACACACACACACACACACCTTCTGNGGGCTCAAAACACAGTNTCACGGG
 CCTTTTCTGCAGGGCAACTTGGCAATTGCCAAATACAATTTAGNGGAT

SEQ ID NO: 466

>13524 BLOOD Hs.229619 gnl|UG|Hs#S219269 y|49d08.s1 Homo sapiens cDNA, 3' end
 /clone=IMAGE:161583 /clone_end=3' /gb=H25761 /gi=894884 /ug=Hs.229619 /len=495
 CCTCATGANCNNGNNTTTAATGTNCCANAAAAACACTNAAAGATATTCNTGTAA
 ATACANATAAGCTNTGTGTCAACATTCAGTACTANGCAAATCATTTTTCACTANG
 ACAAATGACCAACTTACACACTTCNNGGTAGCGCTTAATACTTATCTTTGAACT
 35 CTATTGCTGATGCTAGGCCCTAAAGAGCAATGACTCAACCAGAAAAAATAGTAA
 AGGCTGCCTCTTTCCTTTTTAAAGCGCTTATTAGCTTTANATCCACAAACAATGGG
 TTTTACANCTACATACTACTGAAAGGGTGCTCAAANCGTCACCNCTTACAGGCC
 TTCGAACATGTCATTTTCTAACCCTGGCACATGTAAACTTGTTTTATCCGGCATTC
 AATGGAGGTCCGCTTNCAAATGGGCTCCCAATCATCNGGTTTCAAATCAGGNCA
 40 GGGGCCAAGGGTCCCCGCCGATTAAACNGGCGGCAGGNGGGGCCAAACCCCC
 GG

SEQ ID NO: 467

>13526 BLOOD Hs.260516 gnl|UG|Hs#S219414 y|55d09.s1 Homo sapiens cDNA, 3' end
 45 /clone=IMAGE:162161 /clone_end=3' /gb=H25907 /gi=895030 /ug=Hs.260516 /len=352
 GGTGAACCAGNNTNTTTATCAGTTTATTAATCTATTTTAAATATATAGACTTTTCA
 GTAGACAACAGCATAAAACATATTCTTTCAAGTTCAAATTGAACTTTCACCAAC
 ATAGACCATATTCTGGGCCATAAAATAAACATTGGCAAATTTAAAATAATTGAA
 ATCATATTAAGTTTGTCTCTGACCCTGATAGAGGTAAGCCAGAAATCAAGANCA

GAAAGATATCTAGAAAAATCCCAAATAATTTGGAAGTAAAAGANCACAATTTTA
AATAAACCATGGGGCCAAAGGNAAAGGTCACAGGGGGAANCTCTTAGGNACTG
GANCTAAAATAGGGGGGNATTTTAC

5 SEQ ID NO: 468

>13580 BLOOD 978116.6 Incyte Unique

GGCATGCAGTTTTTGT CAGGCTGCACAGAAAAGCCAGTCATTGAGCTCTGGAAG
AAGCACACGCTAGCCCCGAGAGGATGTCTTTCCGGCCAATGCCCTCCTGGAAATCC
GGCCATTCCAAGTTTGGCTCCATCACCTCGACCACAACGTGAGCCCCAACATCTT
10 CGCCTGGGTCTACAGGGAGATCAATGATGACCTGTCTACCAGATGGACTGCCAC
GCCGTGGAGTGCAGAGAGCAAGCTCGAGGCCAAGAACTGGCCACGCCATGATG
GAGGCCTTCAGGAAGACTTTCCACAGTATGAAGAGCGACGGGGCGGATCCACAGC
AACAGCTCCTCCGAAGAGGTTTCCCAGGAATTGGAATCCGATGATGGCTGAATG
AACTTGAGACGCTTCAGCAAAGGCAGCATTGGTCACGGAGTTCAAGGGAATAGA
15 TGAGTAAGCAACGTTTCAAATTTGGGATGAAAAGACTGCCAAACTATTGGCTGA
CCAAGGTTTTTTAAATTCAGAAGAGCAATTCTAAATCTAAAGAAATGTATCATTAA
AGTAATTACGTTACATTGAAACCTGCTGCTGCTGTGACTGTGAGGAGGGTGGGAG
TGTGGATGGGGAGGAAGGTTCTAGGCTCTCTTCTTATTTTTCTCATTTCCTAATGC
CTCTCTGTGGGAGAGCTCCATGCCAGTTTTACCACGCTCAGGCAAATACTCTGC
20 AGCTGTTATTGGATGGGCCATTCCGATCTGCCTTATGAAATTCACAAGAATGTT
AGGGGCACCTATGGGATCTCTAGTGGGGTGGGCAGGGTGCTGATGGGGACGCTG
GCCGAGGGAGGAAGGAACATCTCGGGAGGGGCCCTCTGTTCCCTCTCCACGGCA
GATGCCCTCCTCTGTATGCAAATCAGCACAGCCTTTATTGAGCTTTACAATAAC
AACCTGATAGTTGGCAGTTAATTCACAGTTACAGATAATGCTTTTATTACATAA
25 ATATACCAAGTAGTACCCTCTTATTGTATTCACTTCATCTATTTTTCTTAGAATACT
TGCAATTACTAATGACCCCTTCCCTTTCCCTCCTGCTGCCCTGTCCACCCTCTTTCC
CCTTCTAACATCCTTAGAGGGATGAAATCTCAGCATATGTTGCAGGACACCAAAA
GGAAGAAAACAATCAAGCAAATAAAATAAACAGTCAAACAAACCAGGAGTTTA
AAACAACAACCCCAACAACAGAAGCCTTGCCAAAGAGGAATGAGTGATCAGCA
30 AGTGAACACACTCTATGTCAACTCTCCTTTTATCCAGCTGAGATTTATGGTAACTT
ATTTAATTAATGGTCCTGTCTGATGCATCCTTGATGGCAAGCTTCAAATCTGATTT
GGTGTACCCGAGGAAACCTTGCCCCATCACTCAGCATTGCACTTAGATACAGAA
TGAGTTAGATAAACTTGGCTTGTCTAGAGACCCATGTCATCTTAACCTAAAGGGA
AATCTTATTGCGTTATCATAAAATTGATGATATCTTAGGGTCAGAATTGCCCTTTT
35 TTTTTATTTTGAATGGGAAGTTCTCACTAAAACAATCCTGAGATTTCTTAATTTCA
TGGTTCTTTAAATATTATAAACACAGAGTCAACATAGAATGAAATTGTATTTGTT
AAAATACACACATTGGAGGACAAGAGCAGATGACTACTTTTCGAAGTAATGCTG
CTCCTTCCT

40 SEQ ID NO: 469

>13715 BLOOD 021290.12 L08488 g186425 Human inositol polyphosphate 1-phosphatase
mRNA, complete cds. 0

GGCTCGGGCAAGCGTGGGGGGCCCGCGCGTCCCGGGAGCCCCGAGGCGGCAGCG
CGCGTTTCCACGCCGCGGTCCCGCGGGAAAGCCGGGGGCGGCGGCCTGGCTGAG
45 GCCAAGCTCGGATCCGGTGCCGAGCCAAGCGGGGCGGTGCGTCGCCGGGGCTTC
GCCTTCGCTCGCGTGACCTCCGCCGTCTCCCCAACCTCGTCCTCTGGCCGCGCC
TGCGGCCGCACGCCAGCGCCCTCGCCTAACCTCGCGCCCGGGCCGCGCCTCCT
CCTCCTCCTGCTCCCCGCGCTTCCGTTTCTCGAGGGAAAGGCTGCTGCCTCCTGC
TCTGTCCTCATCCCCGGCTTAGCTGACGGCCCAGAGGGTGGGTGCCAATTCACC

AGCAGCTGCAACTGAAAAGCAAGGTTTCAGAAATGTCAGATATCCTCCGGGAGCT
GCTCTGTGTCTCTGAGAAGGCTGCTAACATTGCCCGGGCGTGCAGACAGCAGGA
AGCCCTCTTCCAGCTGCTGATCGAAGAAAAGAGAGGGAGAAAAGAACAAGA
AGTTTGCAGTTGACTTCAAGACTCTGGCTGATGTACTGGTACAGGAAGTTATAAA
5 ACAGAATATGGAGAACAAGTTTCCAGGCTTGGAATAAATATTTTTGGAGAAGA
ATCCAATGAGTTTACTAATGACTGGGGGGAAAAGATTACCTTGAGGTTGTGTTCA
ACAGAGGAAGAAACAGCAGAGCTTCTTAGCAAAGTCCTCAATGGTAACAAGGTA
GCATCTGAAGCATTAGCCAGGGTTGTTTCATCAGGATGTTGCCTTTACTGACCCAA
CTCTGGATTCCACAGAGATCAATGTTCCACAGGACATTTTGGGAATTTGGGTGGA
10 CCCCATAGATTCAACTTATCAGTATATAAAAGGTTCTGCTGACATTAAATCCAAC
CAGGGAATCTTCCCCTGTGGACTTCAGTGTGTCACCATTTTAATTGGTGTCTATGA
CATACAGACAGGGGTTCCCCTGATGGGAGTCATCAATCAACCTTTTGTGTCACGA
GATCCAAACACCCCTCAGGTGGAAAGGACAGTGCTATTGGGGCCTTTCTTACATGG
GGACCAACATGCATTCACTACAGCTCACCATCTCTAGAAGAAACGGCAGTGAAA
15 CACACACTGGAAACACCGGCTCTGAGGCAGCATTCTCCCCCAGTTTTTCAGCCGT
AATTAGTACAAGTGAAAAGGAGACTATCAAAGCTGCATTGTCACGTGTGTGTGG
AGATCGCATATTTGGGGCAGCTGGGGCTGGTTATAAGAGCCTATGTGTTGTCCAA
GGCCTCGTTGACATTTACATCTTTTCAGAAGATACCACATTCAAATGGGACTCTT
GTGCTGCTCATGCCATACTGCGGGCCATGGGTGGGGGAATAGTAGACTTGAAAG
20 AATGCTTAGAAAGAAATCCAGAAACAGGGCTTGATTGCCACAGTTGGTGTACC
ACGTGGAATAATGAGGGTGCTGCTGGGGTGATCGGTGGGCCAACAAAGGGAGGA
GTCATTGCATACAGATCCAGGAAGCGGGCTGGAGACATTCTGAGCCTCCTGGTCC
AAAACCTGGCAGCTGCAGAGACGCATACCTAGAGGAACTCTAACCCCGGTGTAC
CTGTATAAACTGAACTGTGAACTGTTTCGGTTATCTCTGTCTTTTGAGGATGGCT
25 TTGTCTCTGTTGCTGGTTAACATTCACCTTCCTCTTTTGAGGAGTATTTTCCATTAT
GTATTCATAATAATGTTAATTTCAATAAATGACATTCATGCAGCAATTATATTGG
TGTATGAAATTCCTACAGTGAATATTGTGCTGTTAGTGCTGCTTGAAACATTTCAA
TAAATATTGACCAGGAAAAAAAAAAAAA

30 SEQ ID NO: 470

>13823 BLOOD 335527.4 M37238 g190035 Human phospholipase C mRNA, complete cds.
0

GAATTCGGCGCTGAGTGACCCGAGTCGGGACGCGGGCTGCGCGCGCGGGACCCC
GGAGCCCAAACCCGGGGCAGGCGGGCAGCTGTGCCCGGGCGGCACGGCCAGCTT
35 CCTGATTTCTCCCGATTCCCTTCCTTCTCCCTGGAGCGGCCGACAATGTCCACCACG
GTCAATGTAGATTCCCTTGCGGAATATGAGAAGAGCCAGATCAAGAGAGCCCTG
GAGCTGGGGACGGTGATGACTGTGTTTCAGCTTCCGCAAGTCCACCCCCGAGCGG
AGAACCGTCCAGGTGATCATGGAGACGCGGCAGGTGGCCTGGAGCAAGACCGCC
GACAAGATCGAGGGCTTCTTGGATATCATGGAAATAAAAGAAATCCGCCCAGGG
40 AAGAACTCCAAAGATTTTCGAGCGAGCAAAAGCAGTTTCGCCAGAAAGAAGACTGC
TGCTTCACCATCCTATATGGCACTCAGTTCGTCTCAGCACGCTCAGCTTGGCAG
CTGACTCTAAAGAGGATGCAGTAACTGGCTCTCTGGCTTGAAAATCTTACACCA
GGAAGCGATGAATGCGTCCACGCCACCATTATCGAGAGTTGGCTGAGAAAGCA
GATATATTCTGTGGATCAAACCAGAAGAAACAGCATCAGTCTCCGAGAGTTGAA
45 GACCATCTTGCCCCTGATCAACTTTAAAGTGAGCAGTGCCAAGTTCCTTAAAGAT
AAGTTTGTGGAAATAGGAGCACACAAAGATGAGCTCAGCTTTGAACAGTTCCAT
CTCTTCTATAAAAACTTATGTTTGAACAGCAAAAATCGATTCTCGATGAATTCA
AAAAGGATTTCGTCCGTGTTTCATCCTGGGGAACTGACAGGCCGGATGCCTCTGC
TGTTTACCTGCATGACTTCCAGAGGTTTCTCATACATGAACAGCAGGAGCATTGG

GCTCAGGATCTGAACAAAGTCCGTGAGCGGATGACAAAGTTCATTGATGACACC
ATGCGTGAAACTGCTGAGCCTTTCTTGTGGATGAGTTCCTCACGTACCTGTT
TTCACGAGAAAAACAGCATCTGGGATGAGAAGTATGACGCGGTGGACATGCAGGA
CATGAACAACCCCTGTCTCATTACTGGATCTCCTCGTCACATAACACGTACCTT
5 ACAGGTGACCAGCTGCGGAGCGAGTCGTCCCCAGAAGCTTACATCCGCTGCCTG
CGCATGGGCTGTCGCTGCATTGAACTGGACTGCTGGGACGGGCCCCGATGGGAAG
CCGGTCATCTACCATGGCTGGACGCGGACTACCAAGATCAAGTTTGATGACGTCG
TGCAGGCCATCAAAGACCACGCCTTTGTTACCTCGAGCTTCCCAGTGATCCTGTC
CATCGAGGAGCACTGCAGCGTGGAGCAACAGCGTCACATGGCCAAGGCCTTCAA
10 GGAAGTATTTGGCGACCTGCTGTTGACGAAGCCACGGAGGCCAGTGCTGACCA
GCTGCCCTCGCCCAGCCAGCTGCGGGAGAAGATCATCATCAAGCATAAGAAGCT
GGGCCCCCGAGGCGATGTGGATGTCAACATGGAGGACAAGAAGGACGAACACA
AGCAACAGGGGGAGCTGTACATGTGGGATTCCATTGACCAGAAATGGACTCGGC
ACTACTGCGCCATTGCTGATGCCAAGCTGTCTTCAGTGATGACATTGAACAGAC
15 TATGGAGGAGGAAGTGCCCCAGGATATACCCCTACAGAACTACATTTTGGGGA
GAAATGGTTCCACAAGAAGGTGGAGAAGAGGACGAGTGCCGAGAAGTTGCTGC
AGGAATACTGCATGGAGACGGGGGGCAAGGATGGCACCTTCCTGGTTCTGGGAGA
GCGAGACCTTCCCCAATGACTACACCCTGTCTTCTGGCGGTCAGGCCGGGTCCA
GCACTGCCGATCCGCTCCACCATGGAGGGCGGGACCCTGAAATACTACTTGACT
20 GACAACTCACCTTCAGCAGCATCTATGCCCTCATCCAGCACTACCGCGAGACGC
ACCTGCCGTGCGCCGAGTTCGAGCTGCGGCTCACGGACCCTGTGCCCAACCCCAA
CCCCCAGGAGTCCAAGCCGTGGTACTATGACAGCCTGAGCCGCGGAGAGGCAGA
GGACATGCTGATGAGGATTCCTCCGGGACGGGGCTTCCTGATCCGGAAGCGAGA
GGGGAGCGACTCCTATGCCATCACCTTCAGGGCTAGGGGCAAGGTAAAGCATTG
25 TCGCATCAACCGGGACGGCCGGCACTTTGTGCTGGGGACCTCCGCCTATTTTGAG
AGTCTGGTGGAGCTCGTCAGTTACTACGAGAAGCATTCACTCTACCGAAAGATGA
GACTGCGCTACCCCGTGACCCCGAGCTCCTGGAGCGCTACAATATGGAAAGAG
ATATAAACTCCCTCTACGACGTCAGCAGAATGTATGTGGATCCCAGTGAAATCAA
TCCGTCCATGCCTCAGAGAACCGTGAAAGCTCTGTATGACTACAAAGCCAAGCG
30 AAGCGATGAGCTGAGCTTCTGCCGTGGTGCCCTCATCCACAATGTCTCCAAGGAG
CCCGGGGGCTGGTGGAAAGGAGACTATGGAACCAGGATCCAGCAGTACTTCCCA
TCCAACTACGTCGAGGACATCTCAACTGCAGACTTCGAGGAGCTAGAAAAGCAG
ATTATTGAAGACAATCCCTTAGGGTCTCTTTCGAGAGGAATATTGGACCTCAATA
CCTATAACGTCGTGAAAGCCCCTCAGGGAAAAAACAGAAAGTCCTTTGTCTTCAT
35 CCTGGAGCCCAAGCAGCAGGGCGATCCTCCGGTGGAGTTTGCCACAGACAGGGT
GGAGGAGCTCTTTGAGTGGTTTCAGAGCATCCGAGAGATCACCTGGAAGATTGA
CACCAAGGAGAACAACATGAAGTACTGGGAGAAGAACCAGTCCATCGCCATCGA
GCTCTCTGACCTGGTTGTCTACTGCAAACCAACCAGCAAAACCAAGGACAACCTTA
GAAAATCCTGACTTCCGAGAAATCCGCTCCTTTGTGGAGACGAAGGCTGACAGC
40 ATCATCAGACAGAAGCCCGTCGACCTCCTGAAGTACAATCAAAAGGGCCTGACC
CGCGTCTACCCAAAGGGACAAAGAGTTGACTCTTCAAACCTACGACCCCTTCCGCC
TCTGGCTGTGCGGTTCTCAGATGGTGGCACTCAATTTCCAGACGGCAGATAAGTA
CATGCAGATGAATCACGCATTGTTTTCTCTCAATGGGCGCACGGGCTACGTTCTG
CAGCCTGAGAGCATGAGGACAGAGAAATATGACCCGATGCCACCCGAGTCCCAG
45 AGGAAGATCCTGATGACGCTGACAGTCAAGGTTCTCGGTGCTCGCCATCTCCCCA
AACTTGGACGAAGTATTGCCTGTCCCTTTGTAGAAGTGGAGATCTGTGGAGCCGA
GTATGACAACAACAAGTTCAAGACGACGGTTGTGAATGATAATGGCCTCAGCCC
TATCTGGGCTCCAACACAGGAGAAGGTGACATTTGAAATTTATGACCCAAACCTG
GCATTTCTGCGCTTTGTGGTTTATGAAGAAGATATGTTTCAGCGATCCCAACTTTCT

TGCTCATGCCACTTACCCCATTAAGCAGTCAAATCAGGATTCAGGTCCGTTCTCT
 CTGAAGAATGGGTACAGCGAGGACATAGAGCTGGCTTCCCTCCTGGTTTTCTGTG
 AGATGCGGCCAGTCCTGGAGAGCGAAGAGGAACTTTACTCCTCCTGTCGCCAGCT
 GAGGAGGCGGCAAGAAGAAGTGAACAACCAGCTCTTTCTGTATGACACACACCA
 5 GAACTTGCGCAATGCCAACCGGGATGCCCTGGTTAAAGAGTTCAGTGTTAATGA
 GAACCAGCTCCAGCTGTACCAGGAGAAATGCAACAAGAGGTAAAGAGAGAAGA
 GAGTCAGCAACAGCAAGTTTTACTCATAGAAGCTGGGGTATGTGTGTAAGGGTA
 TTGTGTGTGTGCGCATGTGTGTTTGCATGTAGGAGAACGTGCCCTATTCACACTCT
 GGGAAAGACGCTAATCTGTGACATCTTTTCTTCAAGCCTGCCATCAAGGACATTTT
 10 TTAAGACCCAACTGGCATGAGTTGGGGTAATTTCTTATTATTTTCATCTTGGACA
 ACTTTCTTAACTTATATTCTTTATAGAGGATTCCCCAAAATGTGCTCCTCATTTTT
 GGCCTCTCATGTTCCAAACCTCATTGAATAAAAGCAATGAAAACCTTGATCAATT
 AAGCCTTCTGTTGCACGACCTGTGCAGTGAACAGGATTTCTTTTCTGGCCAAGAA
 GATTCTACCTCTAATGATCCAGGTAAGTATGTCCATGGAGGATGAGCTGGAAAT
 15 GTAAGAAACTATTTCATGAGACTCTGAAAAAAAAA

SEQ ID NO: 471

>13831 BLOOD 232067.6 AL137411 g6807963 Human mRNA; cDNA DKFZp434M082
 (from clone DKFZp434M082). 1e-86

20 GCAGCTGCAGCGGGCGTGAGTTGGGGGAGGACGGGTGCCGACTCGCCTACCTA
 GCGGTCTCTTGATTGTGCGATATTTTGTGTCATAGGTTTATGTAGAGACGTATACA
 TATATATAGACACACTGTCTTTAAATCTAGGCCTGTATCCGGTGTCCGAGGGCGAA
 CTCAGTAAGATGATGTTAAGAGGAAACCTGAAGCAAGTGCGCATTGAGAAAAAC
 CCGGCCCGCCTTCGCGCCCTGGAGTCCGCGGTGGGCGAGAGCGAGCCGGCGGCC
 25 GNGGCAGCCATGGCGCTCGCTCTTGCCGGGGAGCCGGCACCGCCCGCGCCCGCG
 CCTCCAGAGGACCACCCGGACGAGGAGATGGGGTTCACTATCGACATCAAGAGT
 TTCCTCAAGCCGGGCGAGAAGACGTACACGCAGCGCTGCCGCTCTTCGTGGGA
 AATCTGCCCACCGACATCACGGAGGAGGACTTCAAGAGGCTCTTCGAACGCTAT
 GCGGAGCCCAGCGAAGTCTTCATCAACCGGGACCGTGGCTTCGGCTTCATCCGCT
 30 TGGAATCCAGAACCCTGGCTGAAATTGCAAAAGCAGAGCTGGACGGCACCATT
 TCAAGAGCAGACCTCTACGGATTTCGCTTCGCTACACATGGAGCAGCCTTGACTGT
 CAAGAACCTTTCTCCAGTTGTTTCCAATGAGCTGCTAGAGCAAGCATTTTCTCAG
 TTTGGTCCAGTAGAGAAAGCTGTTGTGGTTGTGGATGATCGCGGTAGAGCTACAG
 GAAAAGGTTTTGTAGAGTTTGCAGCAAAACCTCCTGCACGAAAGGCTCTGGAAA
 35 GATGTGGTGATGGGGCATTCTTGCTAACAACGACCCCTCGTCCAGTCATTGTGGA
 ACCCATGGAGCAGTTTGATGATGAAGATGGCTTGCCAGAGAAGCTGATGCAGAA
 AACTCAACAATATCATAAGGAAAGAGAACAACCACCACGTTTTTGCTCAACCTGG
 GACATTTGAATTTGAGTATGCATCTCGATGGAAGGCTCTTGATGAAATGGAAAAG
 CAGCAGCGTGAGCAGGTTGATAGAAACATCAGAGAAGCCAAAGAGAAACTGGA
 40 GGCAGAAATGGAAGCAGCTAGGCATGAACACCAATTAATGCTAATGAGGCAAGA
 TCTAATGAGGCGTCAAGAAGAACTCAGACGCTTGGAAGAAGTCAAGAAACCAAGA
 GTTGCAAAAACGGAAGCAAATACAATAAGACATGAAGAGGAGCATCGGCGGC
 GTGAGGAAGAAATGATCCGACACAGAGAACAGGAGGAACTGAGGCGACAGCAA
 GAGGGCTTTAAGCCAAACTACATGGAAAATAGAGAACAGGAAATGAGAATGGG
 45 TGATATGGGTCCCCGTGGAGCAATAAACATGGGAGATGCGTTTAGCCCAGCCCCT
 GCTGGTAACCAAGGTCTCTCCAATGATGGGTATGAATATGAACAACAGAGCA
 ACTATACCTGGCCCACCAATGGGTCTGGTCTGCCATGGGACCAGAAGGAGCC
 GCAAATATGGGAACCTCAATGATGCCAGATAATGGAGCAGTGCACAATGACAGA
 TTTCTCAAGGACCACCATCTCAGATGGGTTCACCTATGGGGAGTAGAACAGGTT

5

10

mRNA s

15

20

25

>13852 BLOOD 340851.6 K03195 g183302 Human (HepG2) glucose transporter gene mRNA, complete cds. 0

30

35

40

45

GCAGGCCGGCGGACCCTGCACCTCATAGGCCTCGCTGGCATGGCGGGTTGTGCC
 ATACTCATGACCATCGCGCTAGCACTGCTGGAGCAGCTACCCTGGATGTCCTATC
 TGAGCATCGTGGCCATCTTTGGCTTTGTGGCCTTCTTTGAAGTGGGTCTGGCCCC
 ATCCCATGGTTCATCGTGGCTGAACTCTTCAGCCAGGGTCCACGTCCAGCTGCCA
 5 TTGCCGTTGCAGGCTTCTCCAACCTGGACCTCAAATTTTCATTGTGGGCATGTGCTTC
 CAGTATGTGGAGCAACTGTGTGGTCCCTACGTCTTCATCATCTTCACTGTGCTCCT
 GGTTCTGTTCTTCATCTTCACCTACTTCAAAGTTCCTGAGACTAAAGGCCGGACCT
 TCGATGAGATCGCTTCCGGCTTCCGGCAGGGGGGAGCCAGCCAAAGTGACAAGA
 CACCCGAGGAGCTGTTCCATCCCCTGGGGGCTGATTCCCAAGTGTGAGTCGCCCC
 10 AGATCACCAGCCCGGCCTGCTCCCAGCAGCCCTAAGGATCTCTCAGGAGCACAG
 GCAGCTGGATGAGACTTCCAAACCTGACAGATGTCAGCCGAGCCGGGCTGGGG
 CTCCTTTCTCCAGCCAGCAATGATGTCCAGAAGAATATTCAGGACTTAACGGCTC
 CAGGATTTTAAACAAAAGCAAGACTGTTGCTCAAATCTATTTCAGACAAGCAACAG
 GTTTTATAATTTTTTTTATTACTGATTTTGTATTTTTATATCAGCCTGAGTCTCCTG
 15 TGCCACATCCCAGGCTTCACCCTGAATGGTTCATGCCTGAGGGTGGAGACTAA
 GCCCTGTCGAGACACTTGCCTTCTTCACCCAGCTAATCTGTAGGGCTGGACCTAT
 GTCCTAAGGACACACTAATCGAACTATGAACTACAAAGCTTCTATCCCAGGAGGT
 GGCTATGGCCACCCGTTCTGCTGGCCTGGATCTCCCCACTCTAGGGGTCAGGCTC
 CATTAGGATTTGCCCTTCCCATCTCTTCTACCCAACCACTCAAATTAATCTTTC
 20 TTTACCTGAGACCAGTTGGGAGCACTGGAGTGCAGGGAGGAGAGGGGAAGGGCC
 AGTCTGGGCTGCCGGGTTCTAGTCTCCTTTGCACTGAGGGCCACACTATTACCAT
 GAGAAGAGGGCCTGTGGGAGCCTGCAAACCTCACTGCTCAAGAAGACATGGAGAC
 TCCTGCCCTGTTGTGTATAGATGCAAGATATTTATATATATTTTTGGTTGTCAATA
 TTAATAACAGACACTAAGTTATAGTATATCTGGACAAGCCAACCTTGTAATAACAC
 25 CACCTCACTCCTGTTACTTACCTAAACAGATATAAATGGCTGGTTTTTAGAAACA
 TGGTTTTGAAATGCTTGTGGATTGAGGGTAGGAGGTTTGGATGGGAGTGAGACA
 GAAGTAAGTGGGGTTGCAACCACTGCAACGGCTTAGACTTCGACTCAGGATCCA
 GTCCTTACACGTACCTCTCATCAGTGTCTCTTGCTCAAAAATCTGTTTGATCCC
 TGTTACCCAGAGAATATATACATTCTTTATCTTGACATTCAAGGCATTTCTATCAC
 30 ATATTTGATAGTTGGTGTTCAAAAAACACTAGTTTTGTGCCAGCCGTGATGCTC
 AGGCTTGAAATCGCATTATTTTGAATGTGAAGTAAATACTGTACCTTTATTTGAC
 AGGCTCAAAGAGGTTATGTGCCTGAAGTCGCACAGTGAATAAGCTAAACACCT
 GCTTTTAAACAATGGGTACCATAACAACCACTACTCCATTAACCTCCACCCACCTCCT
 GCACCCCTCCCCACACACACAAAATGAACCACGTTCTTTGTATGGGCCCAATGAG
 35 CTGTCAAAGCTGCCCTGTGTTTCATTTCAATTTGGAATTGCCCCCTCTGGTTCCTCTG
 TATACTACTGCTTCATCTCTAAAGACAGCTCATCCTCCTCCTTCACCCCTGAATTT
 CCAGAGCACTTCATCTGCTCCTTCATCACAAGTCCAGTTTTCTGCCACTAGTCTGA
 ATTTTCATGAGAAGATGCCGATTTGGTTCCTGTGGGTCTCAGCACTATTTCAGTAC
 AGTGCTTGATGCACAGCAGGCACTCAGAAAATACTGGAAAAAATACCCCCACCA
 40 AAGATATTTGTCAAAA

SEQ ID NO: 474

>13879 BLOOD 480881.12 X04790 g28820 Human mRNA for A-raf-1 oncogene. 0

CAGGAGGCCCTGACCAGAGAAGGACCTGGAAGGACTTCAGATGTGAGCAGGATC
 45 TCTTGGACTGTCGTGTGAAAATTAGGCTGCAGGGGTCGACAGGAGCCTGGACTTT
 GAATTTAATTTTGTCCCCTGCCACTTTGCTTCTAGACTATCATTATTGGACCTCTG
 AATTCTTGTCTGCCTTCTTGTAGGAGCCCATGGCACCTGCCCAGCCCCACCTCA
 GCCCATCTTGACAAAATCTAAGGCTCCATGGAGCCACCACGGGGCCCCCCTGCCA
 ATGGGGCCGAGCCATCCCGGGCAGTGGGCACCGTCAAAGTATACCTGCCCAACA

AGCAACGCACGGTGGTGA CTGTCCGGGATGGCATGAGTGTCTACGACTCTCTAG
ACAAGGCCCTGAAGGTGCGGGGTCTAAATCAGGACTGCTGTGTGGTCTACCGAC
TCATCAAGGGACGAAAGACGGTCACTGCCTGGGACACAGCCATTGCTCCCCTGG
ATGGCGAGGAGCTCATTGTGCGAGGTCTTGAAGATGTCCCGCTGACCATGCACAA
5 TTTTGTACGGAAGACCTTCTTCAGCCTGGCGTTCTGTGACTTCTGCCTTAAGTTTC
TGTTCCATGGCTTCCGTTGCCAAACCTGTGGCTACAAGTTCACCAGCATTGTTCC
TCCAAGGTCCCCACAGTCTGTGTTGACATGAGTACCAACCGCCAACAGTTCTACC
ACAGTGTCCAGGATTTGTCCGGAGGCTCCAGACAGCATGAGGCTCCCTCGAACC
GCCCCCTGAATGAGTTGCTAACCCCCCAGGGTCCCAGCCCCCGCACCCAGCACTG
10 TGACCCGGAGCACTTCCCCTTCCCTGCCCCAGCCAATGCCCCCTACAGCGCATC
CGCTCCACGTCCACTCCCAACGTCCATATGGTCAGCACCACGGCCCCCATGGACT
CCAACCTCATCCAGCTCACTGGCCAGAGTTTCAGCACTGATGCTGCCGGTAGTAG
AGGAGGTAGTGATGGAACCCCCCGGGGAGCCCCAGCCAGCCAGCGTGTCTC
GGGGAGGAAGTCCCCACATTCCAAGTCACCAGCAGAGCAGCGCGAGCGGAAGTC
15 CTTGGCCGATGACAAGAAGAAAGTGAAGAACCTGGGGTACCGGGACTCAGGCTA
TTACTGGGAGGTACCACCCAGTGAGGTGCAGCTGCTGAAGAGGATCGGGACGGG
CTCGTTTGGCACCGTGTTTCGAGGGCGGTGGCATGGCGATGTGGCCGTGAAGGTG
CTCAAGGTGTCCCAGCCCACAGCTGAGCAGGCCCAGGCTTTCAAGAATGAGATG
CAGGTGCTCAGGAAGACGCGACATGTCAACATCTTGCTGTTTATGGGCTTCATGA
20 CCCGGCCGGGATTTGCCATCATCACACAGTGGTGTGAGGGCTCCAGCCTCTACCA
TCACCTGCATGTGGCCGACACACGCTTCGACATGGTCCAGCTCATCGACGTGGCC
CGGCAGACTGCCCAGGGCATGGACTACCTCCATGCCAAGAACATCATCCACCGA
GATGTCAGTCTAACAACATCTTCTACATGAGGGGCTCACGGTGAAGATCGGTG
ACTTTGGCTTGGCCACAGTGAAGAETCGATGGAGCGGGGCCAGCCCTTGGAGC
25 AGCCCTCAGGATCTGTGCTGTGGATGGCAGCTGAGGTGATCCGTATGCAGGACCC
GAACCCCTACAGCTTCCAGTCAGACGTCTATGCCTACGGGGTTGTGCTCTACGAG
CTTATGACTGGCTCACTGCCTTACAGCCACATTGGCTGCCGTGACCAGATTATCTT
TATGGTGGGCGCGTGGCTATCTGTCCCCGGACCTCAGCAAAATCTCCAGCAACTGC
CCCAAGGCCATGCGGCGCCTGCTGTCTGACTGCCTCAAGTTCCAGCGGGAGGAG
30 CGGCCCCCTTCCCCCAGATCCTGGCCACAATTGAGCTGCTGCAACGGTCACTCC
CCAAGATTGAGCGGAGTGCCTCGGAACCTCCTTGCACCGCACCCAGGCCGATG
AGTTGCCTGCCTGCCTACTCAGCGCAGCCCGCCTTGTGCCTTAGGCCCCGCCCAA
GCCACCAGGGAGCCAATCTCAGCCCTCCACGCCAAGGAGCCTTGCCCACCAGCC
AATCAATGTTCTGCTCTGCCCTGATGCTGCCTCAGGATCCCCCATTTCCCACCCTG
35 GGAGATGAGGGGGTCCCCATGTGCTTTTCCAGTTCTTCTGGAATTGGGGGACCCC
CGCCAAAGACTGAGCCCCCTGTCTCCTCCATCATTTGGTTTCCTCTTGGCTTTGGG
GATACTTCTAAATTTTGGGAGCTCCTCCATCTCCAATGGCTGGGATTTGTGGCAG
GGATTCCACTCAGAACCTCTCTGGAATTTGTGCCTGATGTGCCTTCCACTGGATTT
TGGGGTTCCCAGCACCCCATGTGGATTTTGGGGGGTCCCTTTTGTGTCTCCCCCGC
40 CATTCAAGGACTCCTCTCTTTCTTCACCAAGAAGCACAGAATTCTGCTGGGC

SEQ ID NO: 475

>14052 BLOOD 1328001.7 L19185 g440307 Human natural killer cell enhancing factor
(NKEFB) mRNA, complete cds. 0

45 ATCCTGACTTTAGTTGCTGGCCGCCTTTGCTTTCCATCCGCTATAGTGGCCTCCTT
TGTCCTTGCGGGGGAAACCGAGGCCACAGCCTTGACGCGCAGGCCTGAATCGCC
CGGATTTCCCGCCCCCTGCTCGTGGGGCCTCACTGTCTCCTTCTGGGCTGGGGG
CTTGGCAGACCGCCCTCCGGCCGACTCGCTCGTGGGGTGTGCTGGTGGCAGTGGCTG
GGTCACTCGTGTCTGCTCAGGAGAGCGGGTCTCCGGCAGCCTCCGGGCCTCGTA

GACCGGGTACCCGGGAGGGTGAGGGTTAGTGCTGTCGCCTCCGCCGTGCTGACTC
 AGTCATAGGGCCCAGCAACGCAGCGCGACCTTGGGTGTTGGGAGGACAAAGTGTCT
 TCCCGGGCGCACTGACCGGGCGGGGGTCTCAGCTTTCAGTCATGGCCTCCGGTAA
 CGCGCGCATCGGAAAGCCAGCCCCCTGACTTCAAGGCCACAGCGGTGGTTGATGG
 5 CGCCTTCAAAGAGGTGAAGCTGTGCGGACTACAAAGGGAAGTACGTGGTCCTCTTT
 TTCTACCCTCTGGACTTCACTTTTGTGTGCCCCACCGAGATCATCGCGTTCAGCAA
 CCGTGCAGAGGACTTCCGCAAGCTGGGCTGTGAAGTGCTGGGCGTCTCGGTGGA
 CTCTCAGTTCACCCACCTGGCTTGGATCAACACCCCCCGGAAAGAGGGAGGCTTG
 GGCCCCCTGAACATCCCCCTGCTTGTGACGTGACCAGACGCTTGTCTGAGGATT
 10 ACGGCGTGCTGAAAACAGATGAGGGCATTGCCTACAGGGGCCTCTTTATCATCG
 ATGGCAAGGGTGTCTTCGCCAGATCACTGTTAATGATTTGCCTGTGGGACGCTC
 CGTGGATGAGGCTCTGCGGCTGGTCCAGGCCTTCCAGTACACAGACGAGCATGG
 GGAAGTTTGTCCCGCTGGCTGGAAGCCTGGCAGTGACACGATTAAGCCCAACGT
 GGATGACAGCAAGGAATATTTCTCCAAACACAATTAGGCTGGCTAACGGATAGT
 15 GAGCTTGTGCCCTGCCTAGGTGCCTGTGCTGGGTGTCCACCTGTGCCCCACCT
 GGGTGCCCTATGCTGACCCAGGAAAGGCCAGACCTGCCCCTCCAACTCCACAG
 TATGGGACCCTGGAGGGCTAGGCCAAGGCCTTCTCATGCCTCCACCTAGAAGCTG
 AATAGTGACGCCCTCCCCCAAGCCCACCCAGCCGCACACAGGCCTAGAGGTAAC
 CAATAAAGTATTAGGGAAAGGTGAGAGTCTGTGTTGGTGTGCTCTGTACTTTCGT
 20 GCTCCCCTGCAACCCCCTTCCTTCTTCAGGCTC

SEQ ID NO: 476
 >14107 BLOOD GB_H72027 gi|1043843|gb|H72027|H72027 ys16e12.r1 Soares breast
 2NbHBst Homo sapiens cDNA clone IMAGE:214990 5' similar to gb:X04412 GELSOBIN
 25 PRECURSOR, PLASMA (HUMAN);, mRNA sequence [Homo sapiens]
 GGATTNAATTTCCCAAACACTGACATTTTAGACAATTTTGCAAGGACTCTGAATT
 TTTGCAGGGCTATTTTTGGATA

SEQ ID NO: 477
 30 >14178 BLOOD GB_H75632 gi|1049954|gb|H75632|H75632 yu07b04.s1 Soares fetal liver
 spleen 1NFLS Homo sapiens cDNA clone IMAGE:233071 3', mRNA sequence [Homo
 sapiens]
 TTATCCAATAATATATTTAATAGGTAAGANCTCATTCATCAATATACAAAAAAA
 AAAAAACAAACCAGAAAACAAAAACTAACTTTGATTAGGACATGTGCCCTTNG
 35 TAGGGGCCTTNACANTTGAANGGTTTNTCGGTGGCACTTTGNGGTNGCATNTTT
 TGTAANGTCACAGGGCTGCTCTGCGTTTTCTCCNGGGTTACAAGGGTNGAGGCCN
 TCAGCCTTTGCCCCGGGAAGAGGGGAAAGTGAANTTNTCTGTACTCNTTGCCAGTG
 TCAGCCTGGANCACACTTTCTACCACCCACCCTTGGGCCATCCCTCCTCTACACTT
 TATGCGTCGGGGGGTTTA

40
 SEQ ID NO: 478
 >14251 BLOOD 977429.8 AF113534 g6523822 Human HP1-BP74 protein mRNA,
 complete cds. 0
 CAGGCATGAGCCACTGCACCCAGCCTATCGTCTGTTGTTAAATGTTCTAATGCAC
 45 CTATTAGGTGCACAGAGTACTGTTATATACTCAGAATAAAATTTACATAATGCTT
 TAAATCTCACAAAATTGTTTTGATAAACATACTCTTATAATTCTTGCAACACCTTG
 GGAAATAGTTGGTTCTATATTACTGTTTTATAGCTGAGGAGAAAGACTCACATCA
 TTTACTAAGATCATATAGCTAGCTAGTAAATGTTTGAGTGAAAATACAAACAAAG
 GTTTTCTGACTTTAAGAGCTTGAGTTTTTCCACTATACCATATTGCATCTGTTGT

AATTGTAACTAATGTGCATTTTAAAATTCTCATTTGTCTTATGTACTGAGCCCTT
ATACCAGTGCTAATTTATGTGACTCCTTTCTCCTGCAGCTAAGAGAAAAATACCT
TTTTAATTCATTTATAGTACCCAGTTTTTAAAGAAGATTTATTTTGTAAAATTTTG
CTTATGGTACATGTCATCTTAGCCTGTAAATAAATTAAAGCATTAATTTTTATCCC
5 TCCCTGGTCTTTTCCCTCCTTCTGACTTTATACGTCTTTCTAGAGAGCTTATCTTCTA
TAATAACAATTCTTTGTTTTAAAGTGAGAAAGATCAGTCTAAAGAAAAGGAGAA
GAAAGTGAAAAAAACAATTCCTTCCTGGGCTACCCTTTCTGCCAGCCAGCTAGCC
AGGGCCCAGAAACAAACACCGATGGCTTCTTCCCCACGTCCCAAGATGGATGCA
ATCTTAACTGAGGCCATTAAGGCATGCTTCCAGAAGAGTGGTGCATCAGTGGTTG
10 CTATTTCGAAAATACATCATCCATAAGTATCCTTCTCTGGAGCTGGAGAGAAGGGG
TTATCTCCTTAAACAAGCACTGAAAAGAGAATTAAATAGAGGAGTCATCAAACA
GGTTAAAGGAAAAGGTGCTTCTGGAAGTTTTGTTGTGGTTCAGAAATCAAGAAA
AACACCTCAGAAATCCAGAAACAGAAAGAATAGGAGCTCTGCAGTGGATCCAGA
ACCACAAGTAAAATTGGAGGATGTCCTCCCACTGGCCTTTACTCGCCTTTGTGAA
15 CCTAAAGAAGCTTCCTACAGTCTCATCAGGAAATATGTGTCTCAGTATTATCCTA
AGCTTAGAGTGGACATCAGGCCTCAGCTGTTGAAGAACGCTCTGCAGAGAGCAG
TAGAGAGGGGCCAGTTAGAACAGATAACTGGCAAAGGTGCTTCGGGGACATTCC
AGCTGAAGAAATCAGGGGAGAAACCCCTGCTTGGTGGAAGCCTGATGGAATATG
CAATCTTGTCTGCCATTGCTGCCATGAATGAGCCGAAGACCTGCTCTACCACTGC
20 TCTGAAGAAGTATGTCCTAGAGAATCACCCAGGAACCAATTCTAACTATCAAATG
CATTTGCTGAAAAAAACCCTGCAGAAATGCGAAAAGAATGGGTGGATGGAACAG
ATCTCTGGGAAAGGGTTCAGTGGCACCTTCAGCTCTGTTTTCCCTATTATCCCAG
CCCAGGAGTTCTGTTTCCGAAGAAAGAGCCAGATGATTCTAGAGATGAGGATGA
AGATGAAGATGAGTCATCAGAAGAAGACTCTGAGGATGAAGAGCCGCCACCTAA
25 GAGAAGGTTGCAGAAGAAAACCCAGCCAAGTCCCCAGGGAAGGCCGCATCTGT
GAAGCAGAGAGGGTCCAAACCTGCACCTAAAGTCTCAGCTGCCAGCGGGGGAA
AGCTAGGCCCTTGCCTAAGAAAGCACCTCCTAAGGCCAAAACGCCTGCCAAGAA
GACCAGACCCTCATCCACAGTCATCAAGAAACCTAGTGGTGGCTCCTCAAAGAA
GCCTGCAACCAGTGCAAGAAAGGAAGTAAAATTGCCGGGCAAGGGCAAATCCAC
30 CATGAAGAAGTCTTTCAGAGTGAAAAAGTAAATTTTATAGGAAAAAAGGGTATC
ATGATGAAATTCAAAATCTTATTTTCTAAGGTCAGTGTGCATTTGTTTAGTTTGA
TGCTTTTCAAATTACATTATTTTCCCTCCCCTATGAACATTGTGGGGAGGGACTCTA
AATAAACCAGTTTAGGCATTTGCTAGCTTTAGGTGCTTTTATTGGTGCCTGCCCTT
TTCCTTGTTCATTTTAATTTCTGCAATAATCCTGGACTTTCCTAAACTATGTAATG
35 TATACTTGTCTTTTTTCTCTGCCTCCCCCAACCCCTGTTGTTTTTATGGTCAGCTT
TGCCTTTTTTTTTTCTTCCAATTTTATCTAAACAGTTGCAGAGATTTTTATATTTGT
AGAAAGCATCAAGAACGGTATGCCAGTCAGGTCCTGGAAGTAAAATGGAGGCAC
AATATAGCACTGACTGAGTTGTAAAGCCTCCTGCCTGGAGACTTCAGTTATAGCT
GTAATAATTAATCTTATTTATAAAAGCCACTCCACTAACCTTTTCTCTCCAAGT
40 AAACACAGAGACAGCTTTGGGAATAAGCCAAAACAGGGTGATCTCATTAGATT
TTGAAGATATATGACTCCTTTGGGCTACATTTCATATTGATCAATTTCTAGGTATT
TTTCACTGGCCCAAAGTATTGCATTCCCTTAACAGCAAGCACAGTTCTCTATAT
CACTTGTNN
NN
45 NNN
NN
NN
NN
NNNNNNNNNNNNCCCACTTGTTTGTGACTGAAGGGGAAGTGTAGAAATATATTG

ATTTGTGATTTCTGGTGTACCTGTGTTACCAAAAATCAAAACAAATCTTTTTTAT
TTTTATTATTATNATTATTTTGAGACA

SEQ ID NO: 479

5 >14308 BLOOD 407458.2 L07894 g292432 Human rod outer segment membrane protein 1
(ROM1) mRNA, complete cds. 0
TGACAGGGGGGCGCGTTATTAGGGCTGAGGATGGGAGGATGCTCAGGGTATTGG
GGTCAGGGTGGCATTAGCCCAGCTCAAGCCGGGCGGGCTGACTCAGCATCCTG
CCCCAGCCAGCTTCCATCCCTGACACCTCTGCACTCCCTTGGGCAGAGATGGGAG
10 ATGGCGCCGGTGTGCCCCCTGGTGTGCCCCCTGCAGCCCCGCATCCGCCTGGCAC
AAGGGCTCTGGCTCCTCTCCTGGCTGCTGGCGCTGGCTGGTGGCGTCATCCTCCT
CTGTAGTGGGCACCTCCTGGTCCAGCTAAGGCACCTTGGCACCTTCCTGGCTCCC
TCCTGTCACTTCCCTGTCCTGCCCCAGGCTGCCCTGGCAGCGGGCGCGGTGGCTC
TGGGCACAGGACTAGTGGGTGTAGGAGCCAGCCGGGCAAGTCTGAATGCAGCTC
15 TATACCCTCCCTGGCGAGGGGTCTTGGGCCCGCTGCTGGTGGCTGGCACGGCTGG
TGGGGGGGGGCTCCTGGTCTGTCGCCCTCGGGCTAGCCCTGGCTTTGCCTGGGAGT
CTGGATGAGGCGCTGGAGGAGGGCCTGGTGAATGGCTTGGCTCACTACAAGGAC
ACAGAGGTGCCTGGGCACTGTCAGGCCAAAAGGCTGGTGGATGAGCTGCAACTG
AGGTACCACTGCTGCGGGCGCCACGGGTACAAGGATTGGTTTGGGGTCCAGTGG
20 GTCAGCAGCCGTTACCTGGATCCCGGTGACCGGGATGTGGCTGACCGGATCCAG
AGCAATGTAGAAGGCCTATACCTGACTGATGGGGTCCCTTTCTCCTGTTGCAACC
CCCACTCAACCCCGGCCTTGCCTGCAAAACCGTCTTTCAGACTCCTACGCCCAACC
CCTGTTTCGATCCCCGACAACCCAAACCAAAACCTCTGGGGCCCAAGGGTGCCATGA
GGTGCTGCTGGAGCACTTGCAGGACTTGGCAGGCACACTGGGTAGCATGCTGGC
25 TGTCACCTTCCTACTGCAGGCTCTGGTGTCTCCTTGGCCTGCGGTACCTGCAAACA
GCACTGGAGGGGCTTGGAGGGGTCAATTGATGCGGGAGGAGAGACCCAGGGCTAT
CTCTTTCCAGTGGGCTGAAAGATATGCTGAAACAGCATGGCTACAGGGAGGG
GTTGCCTGCAGGCCAGCACCTGAGGAGGCCCCACCAGGAGAAGCACCTCCCAAG
GAGGATCTATCTGAGGCCTAGAGGCCTGGAGCTTGGGGTGAGGAAGAGGGAGGG
30 ATGGACAAGTCTGAAAACCTCACAACCTCCTTACCAAGGCTCCAGGTTGGGGGGA
TCGTAGGATTAGAGGGGCTAAGGATAGTCAGCGAGCTGGACTGGGGTAAGAAAG
AAAACCAGATGTCCTAGGGCCTAGCCCTTGTAGTCAGAACCAACAGGGAACAGC
AAAGAACAGAGTGATGGGAAAGTGACATGAGAAGGCCTGGAGGCTGATTCTGAT
ATAGACTCAATAAAGTTTTTGGATGGAAAAAAGCGGCCGCC

SEQ ID NO: 480

40 >14315 BLOOD GB_H84982 gi|1064703|gb|H84982|H84982 ys88a08.s1 Soares retina
N2b5HR Homo sapiens cDNA clone IMAGE:221846 3' similar to SP:HTLF_HUMAN
P32314 HUMAN T-CELL LEUKEMIA VIRUS ENHANCER FACTOR ;contains MER22
repetitive element ;; mRNA sequence [Homo sapiens]
GCTCCCCAGTGGTCAGCGGAGACCCCAAGGAGGATCACAACCTACAGCAGTGCCA
AGTCCTCCAACGCCCGGAGCACCTCGCCCACCAGCGACTCCATCTCCTCCTCCTC
CTCCTCAGCCGACGACCACTATGAGTTTGCCACCAAGGGGAGCCAGGAGGGCAG
CGAGGGCAGCGAGGGGAGCTTCCGGAGCCACGAGAGCCCCAGCGACACGGAAG
45 AGGACGACAGGAAGNACAGCCAGAAGGAGCCCAAGGATTTTTTNGGGGACAGC
GGGTACGATTNCC

SEQ ID NO: 481

>14385 BLOOD 474480.3 Incyte Unique

ATCCTGCCCCGGCCTGTACATCGGCAACTTCAAAGATGCCAGAGACGCGGAACAA
TTGAGCAAGAACAAGGTGACACATATTCTGTCTGTCCACGATAGTGCCAGGCCTA
TGTTGGAGGACAAGACATTTCAAAGAAAGTATTAAATTCATTACGAGTGCCGG
CTCCGCGGTGAGAGCTGCCTTGTACACTGCCTGGCCGGGGTCTCCAGGAGCGTGA
5 CACTGGTGATCGCATACATCATGACCGTCACTGACTTTGGCTGGGAGGATGCCCT
GCACACCGTGCGTGCTGGGAGATCCTGTACCAACCCCAACGTGGGCTTCCAGAG
ACAGCTCCAGGAGTTTGAGAAGCATGAGGTCCATCAGTATCGGCAGTGGCTGAA
GGAAGAATATGGAGAGAGCCCTTTGCAGGATGCAGAAGAAGCCAAAAACATTCT
GGGTAAATATAAGGAGCAAGGGCGCACAGAGCCCCAGCCCGGCGCCAGGCGGT
10 GGAGCAGTTTTCCGGCACTGGCTCCGCTGACCTACGATAATTATACGACGGAGAC
CTAACGCAAGCGACCTGCTGCCTTCCCTTCCCACTGCTTGTCTTCAGTGTGCCCGGC
TGGGCAGGGGTGCGGTGGTGGTGGCCGATGAGGACAGGAAAGGGAGATAGCCA
GGGCGAGGTGGGGCGAGGGCTCCTTTCCCCAAGCAACACCGCCCAGCCCTGCT
CCAGGCCCCTGCACTCAGCCACCCCTACCCTGGCTGCACCTGAGCTTGTGCCC
15 CCGGGGATGTTGCCCAGTGGCTGTGCACTGCTCTGTGCACGTGCGTGTGTGTGAG
TGCACCTTGTGTGTGGGTGACTAAGTGGATGCATGTGTGTGCCTGTGTGAGTGAGG
GTATGTGCACCTAAGTGTGTACATGTGTGTATGTNNNNNNNNNNNNNNNNNNNN
NN
NN
20 TGGAAGGCATTTGAGCTCGACCTCCGAAAAGCTACCCAGCAAAGAGCAGTCTGT
GCCTCTGAGCAGACCGTGAGAACTCAGGGGACGAGTGGCTAAGAGCATGGCCTC
TCCCAGAACCCACCCAGGGTGGTGTGGTGGGGGCAACAGGGGGCCAGACTCCTCT
AGAGGGAGGGTGGCTCTGGGGCCCTGGAAAACGTGAGAGACTGCCCTGAGCTGG
TCCAGTGGGGCCAGCACTTTATAACCAACTCAGCATTTAAGGGAAGTATCTTAGATT
25 GCCTCCATCTCAATGTGAATGCACCAGGCTGAGGGTTCCCTAGCGCCTTGAGTCA
AGGCCACTTTTCAGCCCATCGAGCCCTGAGTTCTACTTGGTGTGTTTGTCTCTGGAG
CTGATTGCACTTGAGCTCTGTGGTGGGCAGGCGCACTTTAGCCTAAGTTGGGTGC
CCCAGGGCACCCCTCCTCTCTGCTCCTTGCCAGCTTCATTCACTCCCAGCCTCTC
GCTGTCTCACTTTGCAGGGGGCTCCTCCTCAACATTTGCATGCACCTGCAAGAAT
30 TGGGAAGAAAGAGCATTTATTAGGCACTGTAGCAATTTGCATTTTAAAATGCCTG
AGCATTTATTAAGCTTCTTGGTATTCACTTGGGTTTGATAATTGATCTGAGCTACC
TCATTGAATGTTTTTGGAAAGGTGTTTTTGGTATGCAAGTCAGCTTTGCCTCACA
GTTGAAAATGTTCCGGTCATGATTGCTTTTGAAACCAAAGGGGAAGGTACCGATAT
CATTGAGCTATTTAAAGTTGCCAGTTTGGGCTCCAGTAATGCTTTCTGGTGGGTA
35 AAATTCCACATTACAGGCCACGAGAGCATCTACAGTTTGTACTCTGGGGCTGCAGG
CATCCTGGGACGCTGTACGCAATTCAGTGGTCTAGTCCTTTATACCGACTCAGAT
TCCTTAAGCATGCAGAGTCACTCGAATGAAAAAACATACTCGACCTCTCCCTAAA
AAGATGTTGCAACCCAGTTTCTCTGAATTCCACCACAAAAAGAGACCCTGAATAA
GAAGAGCAGTTTTCTATGCATATAGAGGGTGTGTCAAAGGTGAGCTTTTTGGGG
40 ACCGGGAAAAACAAAGTTGCCTGATTCCGCGCAGGTGCACAGGCCCCGGATGTA
CACCCGGAAAGGGGAGTGTGGCTGTAGAATCATCCATCCGTCTACAGCTAAAAC
AATTTGCCAATAAAGTACATGTTTTCTTAAGCCAAAAATAAATATAAATACGTT
AACAGAAAAATGATTTAGGATATAGCTTGAATGCTTAAATATGTGCACCTTTACA
AACCTCTCAGTGTATTCTTGGAGTTCTTGAAATGTTGTTTTAATATTTGTTGCCAG
45 TAATGTTCTTTCTTC

SEQ ID NO: 482

>14445 BLOOD GB_H94163 gi|1101459|gb|H94163|H94163 yv14c07.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:242700 5' similar to contains Alu repetitive element;; mRNA sequence [Homo sapiens]

5 CCTGCTTCAGCCTCCCAAGTAGCTGGGATTACAGGCGCCCACCACCGCACCCGGC
TAATTTTTGTATTTTAGTAGGGACGGGATTTCTCCGTGTTGGCCAGGCTTTTTGA
ACTCCTGACCTTAGGTGATCTGCCTGCCTTGGCCTCCCAAAGTGCTGGGATTACA
GGTATGAGCCACTGTGCCCATCCTCATGTCAATTTTAAAGTGATAAATCCTGAT
ATTANACATTGCAATTAGTGTAGAATAAACGCTTGGCTTATAGA ACTCTCTGTTC
10 TTNAGTCTAAAG

SEQ ID NO: 483

>14450 BLOOD 347864.28 Incyte Unique

GCAGCCAGCTCTGAGCGGGAGGCCTGAGCGGGAAGCATTGGGCGTCCGAGCGAC
15 TTCTAGGAGCCTGGGGTTCGGCGCTATGGAGGAGCTCGATGGCGAGCCAACAGT
CACTTTGATTCCAGGCGTGAATTCCAAGAAGAACCAAATGTATTTGACTGGGGT
CCAGGGGAGATGCTGGTATGTGAAACCTCCTTCAACAAAAAGAAAAATCAGAG
ATGGTGCCAAGTTGCCCCCTTTATCTATATCATCCGTAAGGATGTAGATGTTTACTC
TCAAATCTTGAGAAACTCTTCAATGAATCCCATGGAATCTTTCTGGGCCTCCAG
20 AGAATTGACGAAGAGTTGACTGGAAAATCCAGAAAATCTCAATTGGTTTCGAGTG
AGTAAAAACTACCGATCAGTCATCAGAGCATGTATGGAGGAAATGCACCAGGTT
GCAATTGCTGCTAAAGATCCAGCCAATGGCCGCGCAGTTTCAGCAGCCAGGCTCTCCA
TTTTGTGAGCAATGGAGCTCATCTGGAACCTGTGTGAGATTCTTTTTATTGAAGTG
GCCCCAGCTGGCCCTCTCCTCCTCCATCTCCTTGACTGGGTCCGGCTCCATGTGEG
25 CGAGGTGGACAGTTTGTGCGCAGATGTTCTGGGCAGTGAGAATCCAAGCAAACA
TGACAGCTTCTGGAACCTGGTGACCATCTTGGTGCTGCAGGGCCGGCTGGATGAG
GCCCCAGAGATGCTCTCCAAGGAAGCCGATGCCAGCCCCGCCTCTGCAGGCATA
TGCCGAATCATGGGGGACCTGATGAGGACAATGCCATTCTTAGTCTTGGGAAC
ACCCAGACACTGACAGAGCTGGAGCTGAAGTGGCAGCACTGGCACGAGGAATGT
30 GAGCGGTACCTCCAGGACAGCACATTCGCCACCAGCCCTCACCTGGAGTCTCTCT
TGAAGATTATGCTGGGAGACGAAGCTGCCTTGTTAGAGCAGAAGGAACCTTCTGA
GTAATTGGTATCATTTCTAGTGACTCGGCTCTTGTACTCCAATCCCACAGTAAA
ACCCATTGATCTGCACTACTATGCCCAGTCCAGCCTGGACCTGTTTCTGGGAGGT
GAGAGCAGCCCAGAACCCTGGACAACATCTTGTTGGCAGCCTTTGAGTTTGACA
35 TCCATCAAGTAATCAAAGAGTGCAGCATCGCCCTGAGCAACTGGTGGTTTGTGGC
CCACCTGACAGACCTGCTGGACCACTGCAAGCTCCTCCAGTCACACAACCTCTAT
TTCGGTTCCAACATGAGAGAGTTCTCCTGCTGGAGTACGCCTCGGGACTGTTTG
CTCATCCCAGCCTGTGGCAGCTGGGGGTCGATTACTTTGATTACTGCCCCGAGCT
GGGCCGAGTCTCCCTGGAGCTGCACATTGAGCGGATACCTCTGAACACCGAGCA
40 GAAAGCCCTGAAGGTGCTGCGGATCTGTGAGCAGCGGCAGATGACTGAACAAGT
TCGCAGCATTTGTAAGATCTTAGCCATGAAAGCCGTCCGCAACAATCGCCTGGGT
TCTGCCCTCTCTTGAGCATCCGTGCTAAGGATGCCGCCTTTGCCACGCTCGTGTC
AGACAGGTTCTCAGGGATTACTGTGAGCGAGGCTGCTTTTCTGATTTGGATCTC
ATTGACAACCTGGGGCCAGCCATGATGCTCAGTGACCGACTGACATTCCTGGGA
45 AAGTATCGCGAGTTCCACCGTATGTACGGGGAGAAGCGTTTTGCCGACGCAGCTT
CTCTCCTTCTGTCCTTGATGACGTCTCGGATTGCCCTCGGTCTTTCTGGATGACT
CTGCTGACAGATGCCTTGCCCTTTTGAACAGAAACAGGTGATTTTCTCAGCAG
AACAGACTTATGAGTTGATGCGGTGTCTGGAGGACTTGACGTCAAGAAGACCTG
TGCATGGAGAATCTGATACCGAGCAGCTCCAGGATGATGACATAGAGACCACCA

AGGTGGAAATGCTGAGACTTTCTCTGGCACGAAATCTTGCTCGGGCAATTATAAG
 AGAAGGCTCACTGGAAGGTTCTGAGAACTGCTTCAATGTGGTATCTTTGTATGG
 CAATGTATATAGATTTTTTTTAAAAGAATAAATGTTGTTTGCAAATGTAGGTTCTTA
 GAAGTCCACCCAGGGAATTTTTATCTGTCTAGTCTGAACCTGAAGGTGGTAAGA
 5 GATTAAAAAATGC

SEQ ID NO: 484

>14476 BLOOD GB_H94944 gi|1102577|gb|H94944|H94944 yu57h03.r1 Soares fetal liver
 spleen 1NFLS Homo sapiens cDNA clone IMAGE:230261 5' similar to gb:M29893 RAS-
 10 RELATED PROTEIN RAL-A (HUMAN);, mRNA sequence [Homo sapiens]

NTCCTCATNCTCCTNACCCTCCTCCTTCNCNTTCCTTNTCCTCCTCCTCCTCCAGCN
 GCCCAGNTCNCCCCGCNACCCGTCAGACTCCTCCTTCGACCGCTCCCGGCGCGGG
 GCCTTCCAGGCGACAAGGACCGAGTACCCTCCGGCCGGAGCCACGCAGCCGNGC
 TTCCGGAGCCCTCGGGGNGCTGGACTGGCTCGCGGTGCAGATTCTTCTTAATCCT
 15 TTGGTGAAAACCTGAGACACAAAATGGCTGCAAATAAGCCCAAGGGTCAGAATTC
 TTTGGCTTTTACACAAAGTNCATCATGGTGGGCAGTGGTGGCGTGGGCAAGTCAG
 CTCTGAATTCTAACAGTTTCATGTTACGGATGAAGTTTGTGTAGGACTATGTA

SEQ ID NO: 485

>14509 BLOOD Hs.75929 gnl|UG|Hs#S417461 Human mRNA for OB-cadherin-2, complete
 cds /cds=(476,2557) /gb=D21255 /gi=575578 /ug=Hs.75929 /len=3867

ACAGGCGCGCGACGCTCCCCCTCAGCTGGCGGGCGGCGCGGAGAGATGCCGCGGG
 GCGCGCTCGCAGCCGCGCGCTGAATTGTGAATGGGACCGGGACTGGGGCGCGGAG
 TGACACCGCAGCGCTTGCCCTGGGCCAGGGACTGGCGGCTCGGAGGTTGGGTCC
 25 AGCCTCAAGGGCCCCAGAAATCACTGTGTTTTTCAGCTCAGCGGCCCTGTGACATT
 CCTTCGTGTTGTCATTTGTTGAGTGACCAATCAGATGGGTGGAGTGTGTTACAGA
 AATTGGCAGCAAGTATCCAATGGGTGAAGAAGAAGCTAACTGGGGACGTGGGCA
 GCCCTGACGTGATGAGCTCAACCAGCAGAGACATTCCATCCCAAGAGAGGTCTG
 CGTGACGCGTCCGGGAGGCCACCCTCAGCAAGACCACCGTACAGTTGGTGGAAAG
 30 GGGTGACAGCTGCATTCTCCTGTGCCTACCACGTAACCAAAAATGAAGGAGAAC
 TACTGTTTACAAGCCGCCCTGGTGTGCCTGGGCATGCTGTGCCACAGCCATGCCT
 TTGCCCCAGAGCGGCGGGGGCACCTGCGGCCCTCCTTCCATGGGCACCATGAGA
 AGGGCAAGGAGGGGCAGGTGCTACAGCGCTCCAAGCGTGGCTGGGTCTGGAACC
 AGTTCTTCGTGATAGAGGAGTACACCGGGCCTGACCCCGTCTTGTGGGCAGGCT
 35 TCATTCAAGATATTGACTCTGGTGATGGGAACATTAAATACATTCTCTCAGGGGAA
 GGAGCTGGAACCATTTTTGTGATTGATGACAAATCAGGGAACATTCATGCCACCA
 AGACGTTGGATCGAGAAGAGAGAGCCCAGTACACGTTGATGGCTCAGGCGGTGG
 ACAGGGACACCAATCGGCCACTGGAGCCACCGTCGGAATTCATTGTCAAGGTCC
 AGGACATTAATGACAACCCTCCGGAGTTCCTGCACGAGACCTATCATGCCAACGT
 40 GCCTGAGAGGTCCAATGTGGGAACGTCAGTAATCCAGGTGACAGCTTCAGATGC
 AGATGACCCCACTTATGGAAATAGCGCCAAGTTAGTGTACAGTATCCTCGAAGG
 ACAACCCTATTTTTTCGGTGGAAAGCACAGACAGGTATCATCAGAACAGCCCTACCC
 AACATGGACAGGGAGGCCAAGGAGGAGTACCACGTGGTGTATCCAGGCCAAGGA
 CATGGGTGGACATATGGGCGGACTCTCAGGGACAACCAAAGTGACGATCACACT
 45 GACCGATGTCAATGACAACCCACCAAAGTTTCCGCAGAGCGTATACCAGATATCT
 GTGTCAGAAAGCAGCCGTCCCTGGGGAGGAAGTAGGAAGAGTGAAAGCTAAAGA
 TCCAGACATTGGAGAAAATGGCTTAGTCACATACAATATTGTTGATGGAGATGGT
 ATGGAATCGTTTGAAATCACACGGACTATGAAACACAGGAGGGGGTGATAAAG
 CTGAAAAAGCCTGTAGATTTTGAAACCAAAGAGCCTATAGCTTGAAGGTAGAG

GCAGCCAACGTGCACATCGACCCGAAGTTTATCAGCAATGGCCCTTTCAAGGAC
 ACTGTGACCGTCAAGATCGCAGTAGAAGATGCTGATGAGCCCCCTATGTTCTTGG
 CCCCAGTTACATCCACGAAGTCCAAGAAAATGCAGCTGCTGGCACCGTGTTG
 GGAGAGTGCATGCCAAAGACCCTGATGCTGCCAACAGCCCGATAAGGTATTCCA
 5 TCGATCGTCACACTGACCTCGACAGATTTTTTCACTATTAATCCAGAGGATGGTTTT
 ATTA AAACTACAAAACCTCTGGATAGAGAGGAAACAGCCTGGCTCAACATCACT
 GTCTTTGCAGCAGAAATCCACAATCGGCATCAGGAAGCCAAAGTCCCAGTGGCC
 ATTAGGGTCCCTTGATGTCAACGATAATGCTCCCAAGTTTGCTGCCCCCTTATGAAG
 GTTTCATCTGTGAGAGTGATCAGACCAAGCCACTTTCCAACCAGCCAATTGTTAC
 10 AATTAGTGCAGATGACAAGGATGACACGGCCAATGGACCAAGATTTATCTTCAG
 CCTACCCCTGAAATCATTACAAATCCAAATTTACAGTCAGAGACAACCGAGAT
 AACACAGCAGGCGTGTACGCCCGGCGTGGAGGGTTCAGTCGGCAGAAGCAGGAC
 TTGTACCTTCTGCCCATAGTGATCAGCGATGGCGGCATCCCGCCCATGAGTAGCA
 CCAACACCCTCACCATCAAAGTCTGCGGGTGCAGCGTGAACGGGGCACTGCTCTC
 15 CTGCAACGCAGAGGCCTACATTCTGAACGCCGGCCTGAGCACAGGCGCCCTGAT
 CGCCATCCTCGCCTGCATCGTCATTCTCCTGGGTTGCCCAAGCTTAATGGAACCC
 CCCTCTCCAGGGAAGACATGAGATTGCTTTATCTGGGCTTCCAGCTGATGCTAT
 TTTCTATGTTAAAGTAAACAGAAGATTTTGTCTTCTGGGGGTCTTTATAAACTT
 CCTTTCCTCTATGTGGTGGCTACAGAGAGTCCAACCACACTTACGTCATTGTAGT
 20 ATTGTTTGTGACCCTGAGAAGGCCAAAAGAAAGAACCACTCATTGTCTTTGAGGA
 AGAAGATGTCCGTGAGAACATCATTACTTATGATGATGAAGGGGGTGGGGAAGA
 AGACAGAGAAGCCTTTGATATTGCCACCCCTCCAGAATCCTGATGGTATCAATGGA
 TTTATCCSCCGCAAAGACATCAAACCTGAGTATCAGTACATGCCTAGACCTGGGC
 TCCGGGCAGCGCCCAACAGCGTGGATGTCCATGACTTCATCAACACGAGAATAC
 25 AGGAGGCAGACAATGACCCACGGCTCCTCCTTATGACTCCATTCAAATCTACGG
 TTATGAAGGCAGGGGCTCAGTGGCCGGGTCCCTGAGCTCCCTAGAGTCGGCCAC
 CACAGATTCAGACTTGGACTATGATTATCTACAGAACTGGGGACCTCGTTTTAAG
 AAAGTAGCAGATTTGTATGGTTCCAAAGACACTTTTGATGACGATTCTTAACAAT
 AACGATACAAATTTGGCCTTAAGAACTGTGTCTGGCGTTCTCAAGAATCTAGAAG
 30 ATGTGTAAACAGGTATTTTTTTTAAATCAAGGAAAGGCTCATTTAAACAGGCCAAA
 GTTTTACAGAGAGGATACATTTAATAAACTGCGAGGACATCAAAGTGGTAAAT
 ACTGTGAAATACCTTTTCTCAGAAAAGGCCAAATATTGAAGTTGTTTATCAACTT
 CGCTAGAAAAAAAACACTTGGCATACAAAATATTTAAGTGAAGGAGAAGTCT
 AACGCTGAACTGACAATGAAGGGAAATTGTTTATGTGTTATGAACATCCAAGTCT
 35 TTCTTCTTTTTTAAGTTGTCAAAGAAGCTTCCACAAAATTAGAAAGGACAACAGT
 TCTGAGCTGTAATTTGCCTTAAACTCTGGACACTCTATATGTAGTGCATTTTTAA
 ACTTGAAATATATAATATTCAGCCAGCTTAAACCCATACAATGTATGTACAATAC
 AATGTACAATTATGTCTCTTGAGCATCAATCTTGTTACTGCTGATTCTTGTAATC
 TTTTGTCTTCTACTTTCATCTTAAACTAATACGTGCCAGATATAACTGTCTTGTTTC
 40 AGTGAGAGACGCCCTATTTCTATGTCATTTTTAATGTATCTATTTGTACAATTTTA
 AAGTTCTTATTTTAGTATACATATAAATATCAGTATTCTGACATGTAAGAAAATG
 TTACGGCATCACACTTATATTTTATGAACATTGTACTGTTGCTTTAATATGAGCTT
 CAATATAAGAAGCAATCTTTGAAATAAAAAAAGATTTTTTTTT

45 SEQ ID NO: 486

>14510 BLOOD Hs.260473 gnl|UG|Hs#S133063 yf99h12.s1 Homo sapiens cDNA, 3' end
 /clone=IMAGE:30797 /clone_end=3' /gb=R42293 /gi=817160 /ug=Hs.260473 /len=471
 TTTTTTTTTTTNTTTCGCTTTATTTTNAATTTATTTATTTATTTATTTATTTATNT
 ATATNTGAGACAGAGTCTTAACACTGTNGCCAGGNTGGTAGTGCAATGGCGTG

ATCTCAGCTCACTGCAAGCTCTGCCNCTTGGATTTCATGCCTTTCTCCNGCCTCAGC
 CTCCCGAGTAGCTGGGACTACAGGGGCCCCACCACCGCCAGCTAATTTTTTGT
 ACTTTTAGTAGAGACAGGGTTTTACCNTGTTAGCCAGGGTAGTCTCGATCTCCTG
 ACCTCGTGAGCCGCCTGCCTNGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGC
 5 CACCGTGCCTGGGCCACGTCCCTATTTTAGNAAATGAGAGGAGTGACTGCACATA
 GGGAAAAATGCCACTTTTAGGCAATTTCAAAGTGGGAAAACTTTTTTTATATNA
 AAATTTATNCCAATTNCCACCCTTTGG

SEQ ID NO: 487

10 >14521 BLOOD 441403.1 L34789 g514934 Human (clone L6) E-cadherin (CDH1) gene,
 exon 16. 0

AGCTGCTGTGCCCAGCCTCCATGTTTTAATATCAACTCTCACTCCTGAATTCAGTT
 GCTTTGCCCAAGATAGGAGTTCTCTGATGCAGAAATTATTGGGCTCTTTTAGGGT
 AAGAAGTTTGTGTCTTTGTCTGGCCACATCTTGACTAGGTATTGTCTACTCTGAAG
 15 ACCTTTAATGGCTTCCCTCTTTCATCTCCTGAGTATGTAAGTTGCAATGGGCAGCT
 ATCCAGTGACTTGTTCTGAGTAAGTGTGTTCAATTAATGTTTATTTAGCTCTGAAGC
 AAGAGTGATATACTCCAGGACTTAGAATAGTGCCTAAAGTGCTGCAGCCAAAGA
 CAGAGCGGAAGTATGAAAAGTGGGCTTGGAGATGGCAGGAGAGCTTGTCATTGA
 GCCTGGCAATTTAGCAAAGTATGCTGAGGATGATTGAGGTGGGTCTACCTCATC
 20 TCTGAAAATTCTGGAAGGAATGGAGGAGTCTCAACATGTGTTTCTGACACAAGAT
 CCGTGGTTTGTACTCAAAGCCCAGAATCCCCAAGTGCCTGCTTTTGATGATGTCT
 ACAGAAAATGCTGGCTGAGCTGAACACATTTGCCCAATTCAGGTGTGCACAGA
 AAACCGAGAATATTCAAAATTCCAAATTTTTTTCTTAGGAGCAAGAAGAAAATGT
 GGGCCCTAAAGGGGGTGTAGTTGAGGGGTAGGGGGTAGTGAGGATCTTGATTTGGA
 25 TCTCTTTTTATTTAAATGTGAATTTCAACTTTTGACAATCAAAGAAAAGACTTTTG
 TTGAAATAGCTTTACTGTTTCTCAAGTGTGTTTGGAGAAAAAATCAACCCTGCAA
 TCACTTTTTTGAATTGTCTTGATTTTTTCGGCAGTTCAAGCTATATCGAATATAGTT
 CTGTGTAGAGAATGTCACTGTAGTTTTGAGTGTATACATGTGTGGGTGCTGATAA
 TTGTGTATTTTCTTTGGGGGTGGAAAAGGAAAACAATTCAAGCTGAGAAAAGTAT
 30 TCTCAAAGATGCATTTTTATAAATTTTATTAAACAATTTTGTT

SEQ ID NO: 488

>14531 BLOOD 903254.4 U44103 g1174146 Human small GTP binding protein Rab9
 mRNA, complete cds. 0

35 GTTGTTCCTCCGACGCTGGACGGGAGCAGCTGGAGCGGGAGCCTGGCTGCGCT
 ACCGCGGCTGCCTCCTGCTGTGCAGGTCCCCGACCCTCTCTCTGTCTCATTGCGC
 CCAGACGGGCGCGCCAGAGCTCCCGGGTTCGTCTTTCGTGTGGCCGCGAGACACT
 CTTGCACTCCTGTAATGAGCCTGGCACTGTGATGAAACACTTTTCCCGTGTGCTTT
 GAGTGCATCTTCTCAACAACCCTAGGAGGGTCTTGAAGCTTTTGAGATTAAACAA
 40 TGGCAGGAAAATCATCACTTTTTAAAGTAATTCTCCTTGGAGATGGTGGAGTTGG
 GAAGAGTTCATTATGAACAGATATGTAACATAAAGTTTGATAACCCAGCTCTTC
 CATAACAATAGGTGTGGAATTTTTAAATAAAGATTTGGAAGTGGATGGACATTTTG
 TTACCATGCAGATTTGGGACACGGCAGGTCAGGAGCGATTCCGAAGCCTGAGGA
 CACCATTTTACAGAGGTCTGACTGCTGCCTGCTTACTTTTAGTGTGCGATGATTCA
 45 CAAAGCTTCCAGAACTTAAGTAAGTGAAGAAAGAATTCATATATTATGCAGAT
 GTGAAAGAGCCTGAGAGCTTTCCTTTTGTGATTCTGGGTAAACAAGATTGACATAA
 GCGAACGGCAGGTGTCTACAGAAGAAGCCCAAGCTTGGTGCAGGGACAACGGCG
 ACTATCCTTATTTTGAAACAAGTGCAAAAGATGCCACAAATGTGGCAGCAGCCTT
 TGAGGAAGCGGTTCTGAAGAGTTCTTGCTACCGAGGATAGGTGAGATCATTGATT

CAGACAGACACAGTCAATCTTCACCGAAAGCCCAAGCCTAGCTCATCTTGCTGTT
GATTGTTAGATTGTTGATGCATTCTAACCAACTCACACATATACACAAAATCAAC
ATGGGGATGGAGAAGAGAATTAGCGTTTGCAGCAGTGTATCATCTACTAATAAA
ATTAAACTAATGTTGCTGCTTCATTAGTTGGTGGGAGAAGGGACACATCCACTCT
5 TGGAGGAATATATTTACTCAATAATGGCACCTTACATTTATAAATTGTAACAGTT
GTCTAATAACGTTTCTTTAATTTAAATATGTAAGTTGCAGAGCTAATAAATGAAA
TGACCAAGACTTTAATTATAATAAAAAATAAGAACTTGACTATTCTAGAAGTTAT
ACTTGGATTTTTTCCTGGGAAAATGGAGAACTACTTTTTATATGTGTATGTTTTTA
TGCAATTAGCATTGTATTCTTGGTTCAGGGAAATACTTTCCTAAAGCAATAATGT
10 TAGATATTAAAGATTAAATCTAATGTATTTGCAATGCAAAANANANANAAAA

SEQ ID NO: 489

>14654 BLOOD 237623.3 L15203 g402482 Human secretory protein (P1.B) mRNA,
complete cds. 0

15 CCGGAACCAGAACTGGAATCCGCCCTTACCGCTTGCTGCCAAAACAGTGGGGGC
TGAAGTACCTCTCCCCTTTGGGAGAGAAAACTGTCTGGGAGCTTGACAAAGG
CATGCAGGAGAGAACAGGAGCAGCCACAGCCAGGAGGGAGAGCCTTCCCCAAG
CAAACAATCCAGAGCAGCTGTGCAAACAACGGTGCATAAATGAGGCCTCCTGGA
CCATGAAGCGAGTCCTGAGCTGCGTCCCGGAGCCACGGTGGTCATGGCTGCCA
20 GAGCGCTCTGCATGCTGGGGCTGGTCTTGGCCTTGCTGTCTCCAGCTCTGCTGA
GGAGTACGTGGGCCTGTCTGCAAACCAGTGTGCCGTGCCAGCCAAGGACAGGGT
GGACTGCGGCTACCCCGATGTCACCCCCAAGGAGTGCAACAACCGGGGCTGCTG
GTTTGACTCCAGGATCCCTGGAGTGCCCTTGGTGTTCAGCCCTGCAGGAAGCA
GAATGCACCTTCTGAGGCACCTCCAGCTGCCCCCGGCCGGGGGATGCGAGGCTC
25 GGAGCACCTTGCCCGGCTGTGATTGCTGCCAGGCACTGTTTCATCTCAGCTTTTCT
GTCCCTTTGCTCCCGGCAAGCGCTTCTGCTGAAAGTTCATATCTGGAGCCTGATG
TCTTAACGAATAAAGGTCCCATGCTCCACCCGAGGACAGTTCTTCGTGCCTGAGA
AAAAAACAAAGGGGCGGCCG

30 SEQ ID NO: 490

>14709 BLOOD 422524.4 L31409 g493131 Human creatine transporter mRNA, complete
cds. 0

GGCCGTGCGGCCCCGCCGGGGCCATGGCGAAGAAGAGCGCCGAGAACGGCATCTA
TAGCGTGTCCGGCGACGAGAAGAAGGGTCCTCTCATCGTGTCCGGGCCCCGATGG
35 TGCCCCGTCCAAGGGCGATGGCCCTGCGGGCCTGGGGGCGCCCAGCAGCCGCCT
GGCCGTGCCGCGCGCGAGACCTGGACGCGCCAGATGGACTTCATCATGTCGTG
CGTGGGCTTCGCCGTGGGCTTGGGCAACGTGTGGCGCTTCCCCTACCTGTGCTAC
AAGAACGGCGGAGGTGTGTTCTTATTCCTACGTCCTGATCGCCCTGGTTGGAG
GAATCCCCATTTTCTTCTTAGAGATCTCGCTGGGCCAGTTCATGAAGGCCGGCAG
40 CATCAATGTCTGGAACATCTGTCCCCTGTTCAAAGGCCTGGGCTACGCCTCCATG
GTGATCGTCTTCTACTGCAACACCTACTACATCATGGTGCTGGCCTGGGGCTTCT
ATTACCTGGTCAAGTCCTTTACCACCACGCTGCCCTGGGCCACATGTGGCCACAC
CTGGAACACTCCCGACTGCGTGGAGATCTTCCGCCATGAAGACTGTGCCAATGCC
AGCCTGGCCAACCTCACCTGTGACCAGCTTGCTGACCGCCGGTCCCCTGTCATCG
45 AGTTCTGGGAGAACAAAGTCTTGAGGCTGTCTGGGGGACTGGAGGTGCCAGGGG
CCCTCAACTGGGAGGTGACCCTTTGTCTGCTGGCCTGCTGGGTGCTGGTCTACTTC
TGTGTCTGGAAGGGGGTCAAATCCACGGGAAAGATCGTGTACTTCACTGCTACAT
TCCCCTACGTGGTCCTGGTCGTGCTGGTGGTGGAGTGCTGCTGCCTGGCGC
CCTGGATGGCATCATTTACTATCTCAAGCCTGACTGGTCAAAGCTGGGGTCCCCT

CAGGTGTGGATAGATGCGGGGACCCAGATTTTCTTTTCTTACGCCATTGGCCTGG
 GGGCCCTCACAGCCCTGGGCAGCTACAACCGCTTCAACAACAAGTGTACAAGG
 ACGCCATCATCCTGGCTCTCATCAACAGTGGGACCAGCTTCTTTGCTGGCTTCGT
 GGTCTTCTCCATCCTGGGCTTCATGGCTGCAGAGCAGGGCGTGCACATCTCCAAG
 5 GTGGCAGAGTCAGGGCCGGGCCTGGCCTTCATCGCCTACCCGCGGGGCTGTCACGC
 TGATGCCAGTGGCCCCACTCTGGGCTGCCCTGTTCTTCTTCATGCTGTTGCTGCTT
 GGTCTCGACAGCCAGTTTGTAGGTGTGGAGGGCTTCATCACCGGCCTCCTCGACC
 TCCTCCCGGCCTCCTACTACTTCCGTTTCCAAAGGGAGATCTCTGTGGCCCTCTGT
 TGTGCCCTCTGCTTTGTCATCGATCTCTCCATGGTGACTGATGGCGGGATGTACGT
 10 CTTCCAGCTGTTTGACTACTACTCGGCCAGCGGCACCAACCTGCTCTGGCAGGCC
 TTTTGGGAGTGCCTGGTGGTGGCCTGGGTGTACGGAGCTGACCGCTTCATGGACG
 ACATTGCCTGTATGATCGGGTACCGACCTTGCCCTGGATGAAATGGTGCTGGTC
 CTTCTTCACCCCGCTGGTCTGCATGGGCATCTTCATCTTCAACGTTGTGTACTACG
 AGCCGCTGGTCTACAACAACACCTACGTGTACCCGTGGTGGGGTGAGGCCATGG
 15 GCTGGGCCTTCGCCCTGTCCCTCATGCTGTGCGTGCCGCTGCACCTCCTGGGCTGC
 CTCCTCAGGGCCAAGGGCACCATGGCTGAGCGCTGGCAGCACCTGACCCAGCCC
 ATCTGGGGCCTCCACCACTTGAGTACCGAGCTCAGGACGCAGATGTCAGGGGC
 CTGACCACCTGACCCAGTGTCCGAGAGCAGCAAGGTCGTCGTGGTGGAGAGT
 GTCATGTGACAACTCAGCTCACATCACCAGCTCACCTCTGGTAGCCATAGCAGCC
 20 CCTGCTTCAGCCCCACCGCACCCCTCCAGGGGGCCTGCCTTTCCTGACACTTTTG
 GGGTCTGCCTGGGGGAGGAGGGGAGAAAGCACCATGAGTGCTCACTAAAACAAC
 TTTTTCATTTTAAATAAAACGCCAAAATATCACAACCCACCAAAAATAGATGC
 CTCTCCCCCTCCAGCCCTAGCCGAGCTGGTCTTAGGGCCCGCCTAGTGCCCGACC
 CCCAGCCACAGTGCTGCACTCCTGCTGCCCTGCCACGCCACCCCTGCCCGACC
 25 TCTCCAGGCTCTGCTCTGCAGCACACCCGTGGGTGACCCCTCACCCAGAAAGCAG
 CAGTGGCAGCTTGGGAAATGTGAGGAAGGGAAGGAGGGAGAGACGGGAGGGAG
 GAGAGAGAGGAGAAGGGAGGCAGGGGAGGGGCAGCAGAACCAAGGCAAATATT
 TCAGCTGGGCTATACCCCTCTCCCCATCCCTGTTATAGAAGCTTAGAGAGCCAGC
 CAGCAATGGAACCTTCTGGTTCCTGCGCCAATCGCCACCAGTATCAATTGTGTGA
 30 GCTTGGGTGCGAGTGCACGCGTGCGTGAGTACGGAGAGTATATATAGATCTCTAT
 CTCTTAGCAAAGGTGAATGCCAGATGTAAATGGCGCCTCTGGGCAAAGGAGGCT
 TGTATTTTGCACATTTTATAAAAACCTTGAGAGAATGAGATTTCTGCTTGTATATT
 CTAAAAAGAGGAAGGAGCCCAAACCATCCTCTCCTTACCACTCCCATCCCTGTGA
 GCCCTACCTTACCCCTCTGCCCTAGCCAAGGAGTGTGAATTTATAGATCTAACT
 35 TTCATAGGCAAAACAAAAGCTTCGAGCTGTTGCGTGTGTGAGTCTGTTGTGTGGA
 TGTGCGTGTGTGGTCCCCAGCCCCAGACTGGATTGGAAAAGTGCATGGTGGGGG
 CCTCGGGGCTGTCCCCACGCTGTCCCTTTGCCACAAGTCTGTGGGGCAAGAGGCT
 GCAATATTCCGTCCTGGGTGTCTGGGCTGCTAACCTGGCCTGCTCAGGCTTCCCA
 CCCTGTGCGGGGCACACCCCCAGGAAGGGACCCTGGACACGGCTCCCACGTCCA
 40 GGCTTAAGGTGGATGCACTTCCCGCACCTCCAGTCTTCTGTGTAGCAGCTTTAAC
 CCACGTTTGTCTGTCACGTCCAGTCCCGAGACGGCTGAGTGACCCCAAGAAAGGC
 TTCCCCGACACCCAGACAGAGGCTGCAGGGCTGGGGCTGGGTGAGGGTGGCGGG
 CCTGCGGGGACATTCTACTGTGCTAAAAAGCCACTGCAGACATAGCAATAAAAA
 CATGTCATTTTCCAAAGCAAAAAA

SEQ ID NO: 491

>14753 BLOOD Hs.125359 gnl|UG|Hs#S1973371 Homo sapiens mRNA; cDNA
 DKFZp761B15121 (from clone DKFZp761B15121); complete cds /cds=(56,541)
 /gb=AL161958 /gi=7328010 /ug=Hs.125359 /len=1791

GGAGGCTGCAGCAGCGGAAGACCCCAGTCCAGATCCAGGACTGAGATCCCAGAA
 CCATGAACCTGGCCATCAGCATCGCTCTCCTGCTAACAGTCTTGCAGGTCTCCCG
 AGGGCAGAAGGTGACCAGCCTAACGGCCTGCCTAGTGGACCAGAGCCTTCGTCT
 GGACTGCCGCCATGAGAATACCAGCAGTTCACCCATCCAGTACGAGTTCAGCCTG
 5 ACCCGTGAGACAAAGAAGCACGTGCTCTTTGGCACTGTGGGGGTGCCTGAGCAC
 ACATACCGCTCCCGAACCAACTTCACCAGCAAATACAACATGAAGGTCTCTACT
 TATCCGCCTTCACTAGCAAGGACGAGGGCACCTACACGTGTGCACTCCACCACTC
 TGGCCATTCCCCACCCATCTCCTCCCAGAACGTCACAGTGCTCAGAGACAAACTG
 GTCAAGTGTGAGGGCATCAGCCTGCTGGCTCAGAACACCTCGTGGCTGCTGCTGC
 10 TCCTGCTCTCCCTCTCCCTCCTCCAGGCCACGGATTTTCATGTCCCTGTGACTGGTG
 GGGCCCATGGAGGAGACAGGAAGCCTCAAGTTCAGTGCAAGAGATCCTACTTCT
 CTGAGTCAGCTGACCCCTCCCGCAATCCCTCAAACCTTGAGGAGAAAGTGGGG
 ACCCCACCCCTCATCAGGAGTTCAGTGCTGCATGCGATTATCTACCCACGTCCA
 CGCGGCCACCTCACCTCTCCGCACACCTCTGGCTGTCTTTTTGTACTTTTTGTTC
 15 CAGAGCTGCTTCTGTCTGGTTTATTTAGGTTTATCCTTCCTTTTCTTTGAGAGTTC
 GTGAAGAGGGAAGCCAGGATTGGGGACCTGATGGAGAGTGAGAGCATGTGAGG
 GGTAGTGGGATGGTGGGGTACCAGCCACTGGAGGGGTCATCCTTGCCCATCGGG
 ACCAGAAACCTGGGAGAGACTTGGATGAGGAGTGGTTGGGCTGTGCCTGGGCCT
 AGCACGGACATGGTCTGTCTGACAGCACTCCTCGGCAGGCATGGCTGGTGCCTG
 20 AAGACCCAGATGTGAGGGCACCAACAAGATTGTGGCCTACCTTGTGAGGGA
 GAGAACTGAGCATCTCCAGCATTCTCAGCCACAACCAAAAAAAAAAATAAAAAGGG
 GAGCCCTCCTTACCACTGTGGAAGTCCCTCAGAGGCCTTGGGGCATGAGCCAGTG
 AAGATGCAGGTTTGACCAGGAAAGCAGCGCTAGTGGAGGGTTGGAGAAGGAGG
 TAAGGATGAGGGTTCATCATCCCTCCCTGCCTAAGGAAGCTAAAAGCATGGCCCT
 25 GCTGCCCTCCCTGCCTCCACCCACAGTGGAGAGGGCTACAAAGGAGGACAAGA
 CCCTCTCAGGCTGTCCCAAGCTCCCAAGAGCTTCCAGAGCTCTGACCCACAGCCT
 CCAAGTCAGGTGGGGTGGAGTCCCAGAGCTGCACAGGGTTTGGCCCAAGTTTCT
 AAGGGAGGCACTTCCCTCCCTCGCCCATCAGTGCCAGCCCCTGCTGGCTGGTGCC
 TGAGCCCCTCAGACAGCCCCCTGCCCGCAGGCCTGCCTTCTCAGGGACTTCTGC
 30 GGGGCCTGAGGCAAGCCATGGAGTGAGACCCAGGAGCCGGACACTTCTCAGGAA
 ATGGCTTTTCCCAACCCCCAGCCCCACCCGGTGGTTCTTCCTGTTCTGTGACTGT
 GTATAGTGCCACCACAGCTTATGGCATCTCATTGAGGACAAAGAAAACCTGCACA
 ATAAAACCAAGCCTCTGGAATCTAAAAAAAAAAAAAAAAAAAAA

35 SEQ ID NO: 492

>14789 BLOOD 221059.6 M16768 g339399 Human T-cell receptor gamma chain VJCI-CII-CIII region mRNA, complete cds. 0

CCCAGTGCTGCAGGCTGTGTGGGTAGCTGAGCAGAGCTAAGCGGCTTGACGGAC
 CAACATCTCTCCAGCTGGTTGAAGACAAGCTCTCAGAAGACAATGCTGCATGTCA
 40 CAGCCCCAGCAACCAACAACACCAGCCTGACAACCTTGCTGGGGTGGCCGCCTTG
 TGGTCTGAGGTGGCCGTCTAAACTATGTGGTCTGATCTCAGGCTGCAGACCTTGC
 AGGACTGTCTTCACACAGACTGGAAGTGCTAACAGGTGGTGAGGACACCGCTTT
 ACAACGATGCAGGGGGCCCCATGTCACCCTACCCATGGGAAGTTTGACTTGGTG
 GACTCAGCCAAGCCACAGAGGTCTAACGCTTCTCTGCGGTGATTTAGGCTGCC
 45 TGGCAGAAAGCACAGTGCCTGCAGACATGCTGTCACTGCTCCACACATCAACGCT
 GGCAGTCCTTGGGGCTCTGTGTGTATATGGTGCAGGTCACCTAGAGCAACCTCAA
 ATTTCCAGTACTAAAACGCTGTCAAAAACAGCCCGCCTGGAATGTGTGGTATCTG
 GAATAACAATTTCTGCAACATCTGTATATTGGTATCGAGAGAGACCTGGTGAAGT
 CATAAGTTTCTGGTGTCCATTTTCATATGACGGCACTGTCAGAAAGGAATCCGGC

ATTCCGTCAGGCAAATTTGAGGTGGATAGGATACCTGAAACGTCTACTACCACTC
TCACCATTCACAATGTAGAGAAACAGGACATAGCTACCTACTACTGTGCCTTGTG
GGAGGTGTAACCTTTCGAATTATTATAAGAACTCTTTGGCAGTGGAACAACACTT
GTTGTCACAGATAAACAACCTTGATGCAGATGTTTCCCCCAAGCCCACTATTTTCT
5 TCCTTCAATTGCTGAAACAAAGCTCCAGAAGGCTGGAACATACCTTTGTCTTCTT
GAGAAATTTTCCCTGATGTTATTAAGATACATTGGCAAGAAAAGAAGAGCAAC
ACGATTCTGGGGATCCCAGGAGGGGAACACCATGAAGACTAACGACACATACAT
GAAATTTAGCTGGTTAACGGTGCCAGAAAAGTCACTGGACAAAGAACACAGATG
TATCGTCAGACATGAGAATAATAAAAAACGGAGTTGATCAAGAAATTATCTTTCCT
10 CCAATAAAGACAGATGTCATCACAATGGATCCCAAAGACAATTGTTCAAAAGAT
GCAAATGATACTACTGCTGCAGCTCACAAACACCTCTGCATATTACACGTACC
TCCTCCTGCTCCTCAAGAGTGTGGTCTATTTTGCCATCATCACCTGCTGTCTGCTT
AGAAGAACGGCTTTCTGCTGCAATGGAGAGAAATCATAACAGACGGTGGCACAA
GGAGGCCATCTTTTCTCATCGGTTATTGTCCCTAGAAGCGTCTTCTGAGGATCTA
15 GTTGGGCTTTCTTTCTGGGTTTGGGCCATTTTCAGTTCTCATGTGTGTACTATTCTAT
CATTATTGTATAACGGTTTTCAAACCAAGTGGGCACACAGAGAACCTCACTCTGTA
ATAACAATGAGGAATAGCCACGGCGATCTCCAGCACCAATCTCTCCATGTTTTCC
ACAGCTCCTCCAGCCAACCCAAATAGCGCCTGCTATAGTGTAGACATCCTGCGGC
TTCTAGCCTTGTCCTCTCTTAGTGTCTTTAATCAGATAACTGCCTGGAAGCCTT
20 TCATTTTACACGCCCTGAAGCAGTCTTCTTTGCTAGTTGAATTATGTGGTGTGTTT
TTCCGTAATAAGCAAAAATAAATTTAAAAAAATGAAAAGTT

SEQ ID NO: 493
14796 BLOOD 1008401.6 M17783.g183063 Human glia-derived nexin (GDN) mRNA, 5'

25 end. 0
GGACGGCAGGACCAAGAAGCAGCTCGCCATGGTGGAAAGGAACCATGAACTGGC
ATCTCCCCCTCTTCTCTTGGCCTCTGTGACGCTGCCTTCCATCTGCTCCCACTTCA
ATCCTCTGTCTCTCGAGGAACTAGGCTCCAACACGGGGATCCAGGTTTTCAATCA
GATTGTGAAGTCGAGGCCTCATGACAACATCGTGATCTCTCCCCATGGGATTGCG
30 TCGGTCCTGGGGACGCTTCAGCTGGGGGCGGACGGCAGGACCAAGAAGCAGCTC
GCCATGGTGATGAGATACGGCGTAAATGGAGTTGGTAAAATATTAAGAAGATC
AACAAGGCCATCGTCTCCAAGAAGAATAAAGACATTGTGACAGTGGCTAACGCC
GTGTTTGTAAAGAATGCCTCTGAAATTGAAGTGCCTTTTGTACAAGGAACAAAG
ATGTGTTCCAGTGTGAGGTCCGGAATGTGAACTTTGAGGATCCAGCCTCTGCCTG
35 TGATTCCATCAATGCATGGGTAAAAACGAAACCAGGGATATGATTGACAATCT
GCTGTCCCCAGATCTTATTGATGGTGTGCTCACCAGACTGGTCCTCGTCAACGCA
GTGTATTTCAAGGGTCTGTGGAAATCACGGTTCCAACCCGAGAACACAAAGAAA
CGCACTTTCGTGGCAGCCGACGGGAAATCCTATCAAGTGCCAATGCTGGCCCAGC
TCTCCGTGTTCCGGTGTGGGTGACAAAGTGCCCCCAATGATTTATGGTACAACTT
40 CATTGAACTGCCCTACCACGGGGAAAGCATCAGCATGCTGATTGCACTGCCGACT
GAGAGCTCCACTCCGCTGTCTGCCATCATCCACACATCAGCACCAAGACCATAG
ACAGCTGGATGAGCATCATGGTGCCCAAGAGGGTGCAGGTGATCCTGCCCAAGT
TCACAGCTGTAGCACAAACAGATTTGAAGGAGCCGCTGAAAGTTCTTGGCATTAC
TGACATGTTTGATTCATCAAAGGCAAATTTTGCAAAAATAACAAGGTCAGAAAA
45 CCTCCATGTTTCTCATATCTTGCAAAAAGCAAAAATTGAAGTCAGTGAAGATGGA
ACCAAAGCTTCAGCAGCAACAACCTGCAATTCTCATTGCAAGATCATCGCCTCCCT
GGTTTATAGTAGACAGACCTTTTCTGTTTTTCATCCGACATAATCCTACAGGTGCT
GTGTTATTCATGGGGCAGATAAACAACCCCTGAAGAGTATACAAAAGAAACCAT

SEQ ID NO: 494

>14808 BLOOD 336093.2 X12830.1 g33845 Human mRNA for interleukin-6 (IL-6)

receptor. 0

GGCGGTCCCCTGTTCTCCCCGCTCAGGTGCGGCGCTGTGGCAGGAAGCCACCCCC
5 TCGGTCGGCCGGTGC GCGGGGCTGTTGCGCCATCCGCTCCGGCTTTCGTAACCGC
ACCCTGGGACGGCCAGAGACGCTCCAGCGCGAGTTCCTCAAATGTTTTCTCTGCG
TTGCCAGGACCGTCCGCCGCTCTGAGTCATGTGCGAGTGGGAAGTCGCACTGACA
CTGAGCCGGGCCAGAGGGAGAGGAGCCGAGCGCGGCGCGGGGCCGAGGGACTC
GCAGTGTGTGTAGAGAGCCGGGCTCCTGCGGATGGGGGCTGCCCCCGGGGCGCTG
10 AGCCCGCCTGCCCCGCCACCGCCCCGCCCGCCCCCTGCCACCCCTGCCGCCCGGT
TCCCATTAGCCTGTCCGCCTCTGCGGGACCATGGAGTGGTAGCCGAGGAGGAAG
CATGCTGGCCGTCGGCTGCGCGCTGCTGGCTGCCCTGCTGGCCGCGCCGGGAGCG
GCGCTGGCCCCAAGGCGCTGCCCTGCGCAGGAGGTGGCGAGAGGCGTGCTGACC
AGTCTGCCAGGAGACAGCGTGACTCTGACCTGCCCGGGGGTAGAGCCGGAAGAC
15 AATGCCACTGTTCACTGGGTGCTCAGGAAGCCGGCTGCAGGCTCCCACCCAGCA
GATGGGCTGGCATGGGAAGGAGGCTGCTGCTGAGGTTCGGTGCAGCTCCACGACT
CTGGAAACTATTATGCTACCGGGCCGGCCGCCAGCTGGGACTGTGCACTTGCT
GGTGGATGTTCCCCCGAGGAGCCCCAGCTCTCCTGCTTCCGGAAGAGCCCCCTC
AGCAATGTTGTTTGTGAGTGGGGTCCTCGGAGCACCCCATCCCTGACGACAAAGG
20 CTGTGCTCTTGGTGAGGAAGTTTCAGAACAGTCCGGCCGAAGACTTCCAGGAGCC
GTGCCAGTATTCCAGGAGTCCAGAAAGTTCTCCTGCCAGTTAGCAGTCCCGGAG
GGAGACAGCTCTTTCTACATAGTGTCCATGTGCGTCGCCAGTAGTGTGCGGAGCA
AGTTCAGCAAACTCAAACCTTTCAGGGTTGTGGAATCTTGCAGCCTGATCCGCC
TGCCAACATCACAGTCACTGCCGTGGGAGAGAAACCCCGCTGGCTCAGTGTACCC
25 TGGCAAGACCCCCACTCCTGGAACCTCATCTTTCTACAGACTACGGTTTGAGCTCA
GATATCGGGCTGAACGGTCAAAGACATTACAACATGGATGGTCAAGGACCTCC
AGCATCACTGTGTCATCCACGACGCCTGGAGCGGCCTGAGGCACGTGGTGCAGC
TTCGTGCCCAGGAGGAGTTTCGGGCAAGGCGAGTGGAGCGAGTGGAGCCCGGAGG
CCATGGGCACGCCTTGGACAGAATCCAGGAGTCCCTCCAGCTGAGAACGAGGTGT
30 CCACCCCATGCAGGCACTTACTACTAATAAAGACGATGATAATATTCTTCTCAG
AGATTCTGCAAATGCGACAAGCCTCCAGTGCAAGATTCTTCTTCAGTACCACTG
CCCACATTCTGTTGCTGGAGGGAGCCTGGCCTTCGGAACGCTCCTCTGCATTG
CCATTGTTCTGAGGTTCAAGAAGACGTGGAAGCTGCGGGGCTCTGAAGGAAGGCA
AGACAAGCATGCATCCGCCGTACTCTTTGGGGCAGCTGGTCCCGGAGAGGCCTC
35 GACCCACCCAGTGCTTGTTCTCTCATCTCCCCACCGGTGTCCCCCAGCAGCCTG
GGGTCTGACAATACTCGAGCCACAACCGACCAGATGCCAGGGACCCACGGAGC
CCTTATGACATCAGCAATACAGACTACTTCTTCCCCAGATAGCTGGCTGGGTGGC
ACCAGCAGCCTGGACCCTGTGGATGACAAAACACAAACGGGCTCAGCAAAAGAT
GCTTCTCACTGCCATGCCAGCTTATCTCAGGGGTGTGCGGCCTTTGGCTTCACGG
40 AAGAGCCTTGCGGAAGGTTCTACGCCAGGGGAAAATCAGCCTGCTCCAGCTGTT
CAGCTGGTTGAGGTTTCAAACCTCCCTTTCCAAATGCCAGCTTAAAGGGGTTAG
AGTGAACCTGGGCCACTGTGAAGAGAACCATATCAAGACTCTTTGGACACTCAC
ACGGACACTCAAAAGCTGGGCAGGTTGGTGGGGGCCTCGGTGTGGAGAAGCGGC
TGGCAGCCCACCCCTCAACACCTCTGCACAAGCTGCACCCTCAGGCAGGTGGGAT
45 GGATTTCCAGCCAAAGCCTCCTCCAGCCGCCATGCTCCTGGCCCACTGCATCGTT
TCATCTTCCAACCTCAAACCTTTAAACCCCAAGTGCCTTAGCAAATTCTGTTTTTCT
AGGCCTGGGGACGGCTTTTACTTAAACCGCCAAGGCTGGGGGAAGAAGCTCTCT
CCTCCCTTTCTTCCCTACAGTTGAAAAACAGCTGAGGGTGAGTGGGTGAATAATA
CAGTATCTCAGGGCCTGGTCGTTTTCAACAGAATTATAATTAGTTCCTCATTAGC

ATTTTGCTAAATGTGAATGATGATCCTAGGCATTGCTGAATACAGAGGCAACTG
 CATTGGCTTTGGGTTGCAGGACCTCAGGTGAGAAGCAGAGGAAGGAGAGGAGAG
 GGGCACAGGGTCTCTACCATCCCCTGTAGAGTGGGAGCTGAGTGGGGGATCACA
 GCCTCTGAAAACCAATGTTCTCTCTTCTCCACCTCCCACAAAGGAGAGCTAGCAG
 5 CAGGGAGGGCTTCTGCCATTTCTGAGATCAAAACGGTTTTACTGCAGCTTTGTTT
 GTTGTCAGCTGAACCTGGGTAAGTAACTAGGGAAGATAATATTAAGGAAGACAATGTG
 AAAAGAAAAATGAGCCTGGCAAGAATGCGTTTAAACTTGGTTTTTAAAAAACTG
 CTGACTGTTTTCTCTTGAGAGGGTGGGAATATCCAATATTCGCTGTGTCAGCATAG
 AAGTAACTTACTTAGGTGTGGGGGAAGCACCATAACTTTGTTTAGCCCAAAACCA
 10 AGTCAAGTGAAAAAGGAGGAAGAGAAAAAATATTTTCCTGCCAGGCATGGTGGC
 CCACGCACTTCGGGAGGTCGAGGCAGGA

SEQ ID NO: 495

ye38d08.r1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:120015 5' similar
 15 to SP:NINS_DROME P10677 NINAC SHORT PROTEIN,, mRNA sequence

gi|728449|gb|T94961.1|T94961[728449]

TGATTCAAGAAATTGGATACAACTGTGTAGCAGACATCTGGTCCCTGGGAATAAC
 TGCCATAGAAATGGCTGAAGGAAAGCCCCCTTATGCTGATATCCATCCAATGAG
 GGCAATCTTCATGATTCCTACAAATCCTCCTCCCACATTCCGAAAACCAGAGCTA
 20 TGGTCAGATAACTTTACAGATTTTGTGAAACAGTGTCTTGTAAGAGCCCTGAGC
 AGAGGGCCACAGCCACTTCAGGTTCTGTCAGGCACCCATTTGTTTCAGGGAGTTGC
 CAAAGGGAGTGTTCATTTATTGGGAGGATTTAATTTAATGGAAGGGCATGGGGAT
 GTGGAAATTGNAAACGCCAGGGGNTTCCGAGCAGCGGGGAAGTNGGAACGGGG
 NCGTTGAAGGAAAATTTCAGGAAGNGGGTTGAATGGGT TTNTTGGTTCA

SEQ ID NO: 496

>14817 BLOOD 348110.1 X03795 g35365 Human mRNA for platelet derived growth factor
 A-chain (PDGF-A). 0

CCCAGACTCCCTCCGGAGTTCTTCTTGGGGCTGATGTCCGCAAATATGCAGAATT
 30 ACCGGCCGGGTGCTCCTGAAGCCAGCGCGGGGAGCGAGCGCGGGCGGCCAG
 CACCGGGAACGCACCGAGGAAGAAGCCCAGCCCCCGCCCTCCGCCCCCTCCGTC
 CCCACCCCCATCCCGGCGGCCAGGAGGCTCCCCGCGCTGGCGCGCACTCCCTGT
 TTCTCCTCCTCCTGGCTGGCGCTGCCTGCCTCTCCGCACTCACTGCTCGCAGCCGG
 GCGCGCTCCGCCAGCTCCGTGCTCCCCGCGCCACCCTCCTCCGGGCGCGCTCCC
 35 TAAGGGATGGTACTGAATTTGCGCGCCACAGGAGACCGGCTGGAGCGCCCGCCC
 CGCGGCCTCGCCTCTCCTCCGAGCAGCCAGCGCCTCGGGACGCGATGAGGACCTT
 GGCTTGCTGCTGCTCCTCGGCTGCGGATACCTCGCCCATGTTCTGGCCGAGGAA
 GCCGAGATCCCCCGCGAGGTGATCGAGAGGCTGGCCCGCAGTCAGATCCACAGC
 ATCCGGGACCTCCAGCGACTCCTGGAGATAGACTCCGTAGGGAGTGAGGATTCTT
 40 TGGACACCAGCCTGAGAGCTCACGGGGTCCATGCCACTAAGCATGTGCCCGAGA
 AGCGGCCCTGCCATTCCGGAGGAAGAGAAGCATCGAGGAAGCTGTCCCCGCTG
 TCTGCAAGACCAGGACGGTCATTTACGAGATTCCTCGGAGTCAGGTCGACCCAC
 GTCCGCCAACTTCTGATCTGGCCCCCGTGCGTGGAGGTGAAACGCTGCACCGGC
 TGCTGCAACACGAGCAGTGTCAAGTGCCAGCCCTCCCGCGTCCACCACCGCAGC
 45 GTCAAGGTGGCCAAGGTGGAATACGTCAGGAAGAAGCCAAAATTAAAAGAAGT
 CCAGGTGAGGTTAGAGGAGCATTTGGAGTGCGCCTGCGCGACCACAAGCCTGAA
 TCCGGATTATCGGGAAGAGGACACGGGAAGGCCTAGGGAGTCAGGTAAAAAAC
 GGAAAAGAAAAAGGTTAAAACCCACCTAAAGCAGCCAACCAGATGTGAGGTGA
 GGATGAGCCGACGCCCTTTCCTGGGACATGGATGTACATGGCGTGTTACATTCTT

GAACCTACTATGTACGGTGCTTTATTGCCAGTGTGCGGTCTTTGTTCTCCTCCGTG
AAAAACTGTGTCCGAGAACACTCGGGAGAACAAAGAGACAGTGCACATTTGTTT
AATGTGACATCAAAGCAAGTATTGTAGCACTCGGTGAAGCAGTAAGAAGCTTCC
TTGTCNNACNAAACCACAAATGAC
NAAAACNAAACGGACTCACAAAAATATCTAAACTCGATGAGATGGAGGGTCGCC
CCGTGGGATGGAAGTGCAGAGGTCTCAGCAGACTGGATTTCTGTCCGGGTGGTC
ACAGGTGCTTTTTTGCCGAGGATGCAGAGCCTGCTTTGGGAACGACTCCAGAGGG
TGCTGGTGGGCTCTGCAGGGGGCCCGCAGGAAGCAGGAATGTCTTGGAACCGC

10 SEQ ID NO: 497

>14833 BLOOD 346440.21 X55005 g29878 Human mRNA for thyroid hormone receptor alpha 1 THRA1, (c-erbA-1 gene). 0

CCGGCCGGGCGCGCCGAGCCCGAGCCCGAGCCCGGAGCGGGGCGGGGGAGGGAG
GAGCCAGAGCGGGCCCGCCTCTGCCGGAGGAGCCGCGGGGCGCCACACTCGC
15 CCCCCGCCCCCCCCGCGCTACTCGCACTCACACCCGGGCGCAGGAGGCGGGCG
GCCCCGGGCCCCACCGGCCCCCCCATGGACGCCCCCAGCACGGGGGCGCTGAGACC
CCCGCGTCTGCTGCCCAGCCCGGTCCGGCGCGCCACGCCGAGGGATCTCTGGACA
GGACAAGACTCCGAAGCTACTCCCCCAGCACACAGCCCGGGACCCACAAACCCA
GCTTGCCCCCAGCCCTCCCACCTGCCACTCCCTGGCCCCCTCCACCGCCCGCCCCC
20 CTTGGGGGCGCAGGGGCGATGGTGTGAAAGGCCAAGTGCTGAGGCGGGTATCATGG
GTGCTGTGCCCTAGGGCCTGGGTGGCAGGGGGTGGGTGGCCTGTGGGTGTGCCG
GGGGGGCCAGTGTGCCCAACCCAGTCTCTTGGGGGTGCTGGAGGGCATCCTGGAT
GGAATTGAAGTGAATGGAACAGAAAGCCAAAGCAAGGTGGAGTGTGGGTGAGACC
CAGAGGAGAACAGTGGCAGGTCAACAGATGGAAAGCGAAAAAGAAAGAACGGC
25 CAATGTTCCCTGAAAACAGCATGTCAGGGTATATCCCTAGTTACCTGGACAAAG
ACGAGCAGTGTGTCTGTGTGGGGACAAGGCAACTGGTTATCACTACCGCTGTAT
CACTTGTGAGGGCTGCAAGGGCTTCTTTCCCGCACAATCCAGAAGAACCTCCAT
CCCACCTATTCTTGCAAATATGACAGCTGCTGTGTTCATTGACAAGATCACCCGCA
ATCAGTGCCAGCTGTGCCGCTTCAAGAAGTGCATCGCCGTGGGCATGGCCATGG
30 ACTTGTTCTAGATGACTCGAAGCGGGTGGCCAAGCGTAAGCTGATTGAGCAGA
ACCGGGAGCGGCGGCGGAAGGAGGAGATGATCCGATCACTGCAGCAGCGACCA
GAGCCCACTCCTGAAGAGTGGGATCTGATCCACATTGCCACAGAGGGCCCATCGC
AGCACCAATGCCAGGGGCGAGCCATTGGAAACAGAGGCGGAAATTCCTGCCCGA
TGACATTGGCCAGTCACCCATTGTCTCCATGCCGGACGGAGACAAGGTGGACCTG
35 GAAGCCTTCAGCGAGTTTACCAAGATCATCACCCCGGCCATCACCCGTGTGGTGG
ACTTTGCCAAAAAACTGCCCATGTTCTCCGAGCTGCCTTGCGAAGACCAGATCAT
CCTCCTGAAGGGGTGCTGCATGGAGATCATGTCCCTGCGGGCGGCTGTCCGCTAC
GACCCTGAGAGCGACACCCTGACGCTGAGTGGGGAGATGGCTGTCAAGCGGGAG
CAGCTCAAGAATGGCGGCCTGGGCGTAGTCTCCGACGCCATCTTTGAACTGGGCA
40 AGTCACTCTCTGCCTTTAACCTGGATGACACGGAAGTGGCTCTGCTGCAGGCTGT
GCTGCTAATGTCAACAGACCGCTCGGGCCTGCTGTGTGTGGACAAGATCGAGAA
GAGTCAGGAGGCGTACCTGCTGGCGTTCGAGCACTACGTCAACCACCGCAAACA
CAACATTCCGCACTTCTGGCCCAAGCTGCTGATGAAGGTGACTGACCTCCGCATG
ATCGGGGCCTGCCACGCCAGCCGCTTCCCTCCACATGAAAGTCGAGTGCCCCACCG
45 AACTCTTCCCCCACTCTTCTCGAGGTCTTTGAGGATCAGGAAGTCTAAAGCCT
CAGGCGGCCAGAGGGTGTGCGGAGCTGGTGGGGAGGAGCCTGGAGAGAAGGGG
CAGAGCTGGGGGCTGAGGGAGACCCCCCACACCCCTTCTCTCCTTCTCTCGTC
CTTGATAGATTGAGTCCCACACACACACCCGCACTGCCAGGTCCCTCCTCAG
ACCTCCAGCCCTGGGACAGGGCAAACAACCTGAACTTGCTATGGAAAGGACAGTG

TGGGAGGCTGGGGGAGCTGTGTCCTGCAGTTCCCAGGACCCCATCCTCTCAGAAG
 GTAGGGGAAGGGCGGGAGGATTGAGAAGGGACAAGCCACCTTGACCGTAGGGG
 AAGGAGGAATGTGGGCTGGGGGAAGATGCCCTCAACTACCCCCTACACACACA
 TGAGAGAGAGCCCCCACCAGTTCCTTGGCCTAGGTCTCCCCTCCAGGCTGAGGG
 5 CCTCTCTACTTCCCCAGATGCCTGGGTGCAAAGAACGGCTTGGCTTGGCTCCTCC
 TCTGGAGGTTAAAATTTATAGTCATTCTAACTGCACTTTGGAAACCAAGCAAGGG
 GAGAAGACAAATGAAGAAAACTAGACAGAGAGAAAAATACAAAAAAGAGAG
 AGCGAGCGATAGAGAGAGATGATATTAAGTTATTAAGTGGCTGACCAGAGGG
 GAGGACCCCCCTTTACCACCCCATGCACTTTGCGAGCTGCCCCCTTCTTCCCCAC
 10 ATCAGAGAGAAATGCCCCACACCAGAGCCCCTTCTCCTGGTGGCGGGTCTGCA
 GGGCTGGGAGAGGGCAGGGCGTTGTGAGAGAGAGACCGTCCATAAGGAGGACA
 GTAACCTCTGTCCTGGGAACCTCTGGGCGGGGGGGGAGGGGGACACTGCCCAGA
 GGCGC

15 SEQ ID NO: 498

>14849 BLOOD 403113.1 M26685 g186569 Human IsK protein (exhibiting a slowly
 activating channel activity) gene, complete cds, clone phKI2. 0

GGGAACAACGCATTTGACACTTGACTGGGATACACTACCGGATCCTCCGAGGGT
 GATGGTTCTCAAGAAGGCAGAAGCAATGGTGACCAATAGACCTCCTTAAAGGCT
 20 GAGCCGCTGGGCACCTTCCTACTCCTCTCGACCGTGCTAGGATGACTGCAGCAGA
 GTCCCCGAGTCCTTTGATGCAAGGGTCTAGCAACCACCAAACAGACAAGCCCTTC
 GGCCTGTCCTGGAGGGCGTTGAATGGCATGGCCTGGAGCTCAACCAGGAGAAAC
 GTGCTCAGGAGGAAGAGACCAGAAGGATAACTCAAAAAGTTCTGAGAAAGTTCCT
 AAGACCACCTGAAGAGAAGGAGCCTGCTGCCAATGGTGTGGACACCGCAGTGTG
 25 CTTGAGGAGACTTCAGAAACGAGAAGTGTTCACACAATCATCAGGTGAGCCGA
 GGATCCATTGGAGGAAGGCATTATCTGTATCCAGAGGAAATAGCCAAGGATATT
 CAGAGGTGTGCCTGGGAAGTTTGAGCTGCAGCAGTGGAACCTTAATGCCCAGGA
 TGATCCTGTCTAACACCACAGCGGTGACGCCCTTCTGACCAAGCTGTGGCAGGA
 GACAGTTCAGCAGGGTGGCAACATGTGCGGCCTGGCCCGCAGGTCCCCCGCAG
 30 CGGTGACGGCAAGCTGGAGGCCCTCTACGTCCTCATGGTACTGGGATTCTTCGGC
 TTCTTACCCTGGGCATCATGCTGAGCTACATCCGCTCCAAGAAGCTGGAGCACT
 CGAACGACCCATTCAACGTCTACATCGAGTCCGATGCCTGGCAAGAGAAGGACA
 AGGCCTATGTCCAGGCCCGGGTCTGGAGAGCTACAGGTGCTGCTATGTCGTTGA
 AAACCATCTGGCCATAGAACAACCCAACACACACCTTCCTGAGACGAAGCCTTC
 35 CCCATGAACCCCACTGGCTAAA

SEQ ID NO: 499

>14852 BLOOD 474647.3 M27492 g186289 Human interleukin 1 receptor mRNA, complete
 cds. 0

40 GTACCAGCTGGGGCCGTCCGGCAAGATGTGAGTTGTCACTCTGCTGCGGCACAG
 ACCTGAATTAACAACCTCTAGCTAGGGCTGACTTCAAAAAGCACTTTCGTTTTTTA
 ATAACCAACATCAGCTCAGCAGGCTTCATTTGGGAAAAGAAACCTTGTGCGGATTA
 CCCCACATTCTCCACCTCCTGGGAGGCCAGCCATTCCCAAATGCCCCAAGGATG
 AAGAACGGAGACGGTAGACGCACCCCTCTGAAGATGGTGACTCCCTCCTGAGAAG
 45 CTGGACCCCTTGGTAAAAGACAAGGCCTTCTCCAAGAAGAATATGAAAGTGTTA
 CTCAGACTTATTTGTTTCATAGCTCTACTGATTTCTTCTCTGGAGGCTGATAAATG
 CAAGGAACGTGAAGAAAAAATAATTTTAGTGTCATCTGCAAATGAAATTGATGT
 TCGTCCCTGTCTCTTAACCCAAATGAACACAAAGGCACTATAACTTGGTATAAA
 GATGACAGCAAGACACCTGTATCTACAGAACAAGCCTCCAGGATTTCATCAACAC

AAAGAGAAGCTTTGGTTTGTTCCTGCTAAGGTGGAGGATTCAGGACATTACTATT
GCGTGGTAAGAAATTCATCTTACTGCCTCAGAATTAATAAGTGCAAAATTTGT
GGAGAATGAGCCTAACTTATGTTATAATGCACAAGCCATATTTAAGCAGAACT
ACCCGTTGCAGGAGACGGAGGACTTGTGTGCCCTTATATGGAGTTTTTTAAAAAT
5 GAAAATAATGAGTTACCTAAATTACAGTGGTATAAGGATTGCAAACCTCTACTTC
TTGACAATATACACTTTAGTGGAGTCAAAGATAGGCTCATCGTGATGAATGTGGC
TGAAAAGCATAGAGGGAACATACTTGTTCATGCATCCTACACATACTTGGGCAA
GCAATATCCTATTACCCGGGTAATAGAATTTATTACTCTAGAGGAAAACAAACCC
ACAAGGCCTGTGATTGTGAGCCCAGCTAATGAGACAATGGAAGTAGACTTGGGA
10 TCCCAGATACAATTGATCTGTAATGTCACCGGCCAGTTGAGTGACATTGCTTACT
GGAAGTGGAATGGGTGAGTAATTGATGAAGATGACCCAGTGCTAGGGGAAGACT
ATTACAGTGTGGAAAATCCTGCAAACAAAAGAAGGAGTACCCTCATCACAGTGC
TTAATATATCGGAAATTGAAAGTAGATTTTATAAACATCCATTTACCTGTTTTGCC
AAGAATACACATGGTATAGATGCAGCATATATCCAGTTAATATATCCAGTCACTA
15 ATTTCCAGAAGCACATGATTGGTATATGTGTACGTTGACAGTCATAATTGTGTG
TTCTGTTTTTCATCTATAAAATCTTCAAGATTGACATTGTGCTTTGGTACAGGGATT
CCTGCTATGATTTTCTCCCAATAAAAGCTTCAGATGGAAAGACCTATGACGCATA
TATACTGTATCCAAAGACTGTTGGGGAAGGGTCTACCTCTGACTGTGATATTTTT
GTGTTTAAAGTCTTGCCTGAGGTCTTGGAAAAACAGTGTGGATATAAGCTGTTCA
20 TTTATGGAAGGGATGACTACGTTGGGGAAGACATTGTTGAGGTCATTAATGAAA
ACGTAAAGAAAAGCAGAAGACTGATTATCATTTTAGTCAGAGAAACATCAGGCT
TCAGCTGGCTGGGTGGTTCATCTGAAGAGCAAATAGCCATGTATAATGCTCTTGE
TCAGGATGGAATTAAAGTTGTCTGCTTGAGCTGGAGAAAATCCAAGACTATGA
GAAAATGCCAGAATCGATTAAATTCATTAAGCAGAAACATGGGGCTATCCGCTG
25 GTCAGGGGACTTTACACAGGGACCACAGTCTGCAAAGACAAGGTTCTGGAAGAA
TGTCAGGTACCACATGCCAGTCCAGCGACGGTCACCTTCATCTAAACACCAGTTA
CTGTCACCAGCCACTAAGGAGAAACTGCAAAGAGAGGCTCACGTGCCTCTCGGG
TAGCATGGAGAAGTTGCCAAGAGTTCTTTAGGTGCCTCCTGTCTTATGGCGTTGC
AGGCCAGGTTATGCCTCATGCTGACTTGACAGAGTTCATGGAATGTAACATATCA
30 TCCTTTATCCCTGAGGTCACCTGGAATCAGATTATTAAGGGAATAAGCCATGACG
TCAATAGCAGCCCAGGGCACTTCAGAGTAGAGGGCTTGGAAGATCTTTTAAAA
AGGCAGTANNN
NN
NN
35 NNN
NN
NNCCCT
CTCTGAATGTTTGAAGTCCAAGAAAAGGCATGGAGACAGCGAACTAGAAGAAA
GGGCAAGAAGGAAATAGCCACCGTCTACAGATGGCTTAGTTAAGTCATCCACAG
40 CCAAGGGCGGGGCTATGCCTTGTCTGGGGACCCTGTAGAGTCACTGACCCTGGA
GCGGCTCTCCTGAGAGGTGCTGCAGGCAAAGTGAGACTGACACCTCACTGAGGA
AGGGAGACATATTCTTGAGAACTTTCCATCTGCTTGTATTTTCCATACACATCCC
CAGCCAGAAGTTAGTGTCCGAAGACCGAATTTTATTTTACAGAGCTTGAAAACCTC
ACTTCAATGAACAAAGGGATTCTCCAGGATTCCAAAGTTTGAAGTCATCTTAGC
45 TTTCCACAGGAGGGAGAGAACTTAAAAAAGCAACAGTAGCAGGGAATTGATCCA
CTTCTTAATGCTTTTCTCCCTGGCATGACCATCCTGTCTTTGTTATTATCCTGCAT
TTTACGTCTTTGGAGGAACAGCTCCCTAGTGGCTTCTCCATCTGCAATGTCCCTT
GCACAGCCCACACATGAACCATCCTTCCCATGATGCCGCTCTTCTGTATCCCGC
TCCTGCTGAAACACCTCCCAGGGGCTCCACCTGTTCAAGGAGCTGAAGCCCATGCT

TTCCCACCAGCATGTCACTCCCAGACCACCTCCCTGCCCTGTCCTCCAGCTTCCCC
 TCGCTGTCCTGCTGTGTGAATTCCCAGGTTGGCCTGGTGGCCATGTCGCCTGCCCC
 CAGCACTCCTCTGTCTCTGCTCTTGCCTGCACCCTTCCTCCTCCTTTGCCTAGGAG
 GCCTTCTCGCATTTTCTCTAGCTGATCAGAATTTTACCAAAATTGAGAACATCCTC
 5 CAATTCCACAGTCTCTGGGAGACTTTCCCTAAGAGGGCGACTTCCTCTCCAGCCTT
 CTCTCTCTGGTCAGGCCCACTGCAGAGATGGTGGTGAGCACATCTGGGAGGCTGG
 TCTCCCTCCAGCTGGAATTGCTGCTCTCTGAGGGAGAGGGCTGTGGTGGCTGTCTC
 TGTCCCTCACTGCCTTCCAGGAGCAATTTGCACATGTAACATAGATTTATGTAAT
 GCTTTATGTTTAAAAACATTCCCCAATTATCTTATTTAATTTTTGCAATTATTCTA
 10 ATTTTATATATAGAGAAAGTGACCTATTTTTTAAAAAAATCACACTCTAAGTTCT
 ATTGAACCTAGGACTTGAGCCTCCATTTCTGGCTTCTAGTCTGGTGTCTGAGTAC
 TTGATTTTCAAGTCAATAACGGTCCCCCTCACTCCACACTGGCACGTTTGTGAGA
 AGAAATGACATTTTGTAGGAAGTGACCGAGTCTAGGAATGCTTTTTATTCAAGAC
 ACCAAATTCCAACTTCTAAATGTTGGAATTTTCAAAAATTGTGTTTAGATTTTAT
 15 GAAAACTCTTCTACTTTTCATCTATTCTTTCCCTAGAGGCAAACATTTCTTAAAT
 GTTTCATTTTCATTAAAAATGAAAGCCAAATTTATATGCCACCGATTGCAGGACA
 CAAGCACAGTTTTAAGAGTTGTATGAACATGGAGAGGACTTTTGGTTTTTATATT
 TCTCGTATTTAATATGGGTGAACACCAACTTTTATTTGGAATAATAATTTTCCTCC
 TAAACAAAAACACATTGAGTTTAAGTCTCTGACTCTTGCCTTTCCACCTGCTTTCT
 20 CCTGGGCCCCGCTTTGCCTGCTTGAAGGAACAGTGCTGTTCTGGAGCTGCTGTTCC
 AACAGACAGGGCCTAGCTTTCATTTGACACACAGACTACAGCCAGAAGCCCATG
 GAGCAGGGGATGTACGCTTTGAAAAGCCTATTAGATGTTTTACAAATTTAATTT
 TGCAGATTATTTTAGTCTGTTCATCCAGAAAATGTGTGTCAGCATGCATAGTGTAAAG
 TAAAGCAAGCCAAATTTGGAAACTTAGGTTAGTGACAAAATTGGCCAGAGAGTGGG
 25 GGTGATGATGACCAAGAATTACAAGTAGAATGGCAGCTGGAATTTAAGGAGGGA
 CAAGAATCAATGGATAAGCGTGGGTGGAGGAAGATCCAAACAGAAAAGTGCAA
 AGTTATTCCCCATCTTCCAAGGGTTGAATTCTGGAGGAAGAAGACACATTCCTAG
 TTCCCCGTGAACCTTCTTTGACTTATTGTCCCCACTAAAACAAAAACAAAAACTT
 TTAATGCCTTCCACATTAATTAGATTTTCTTGCAGTTTTTTTATGGCATTTTTTTAA
 30 AGATGCCCTAAGTGTTGAAGAAGAGTTTGCAAATGCAACAAAATATTTAATTACC
 GGTGTTAAACTGGTTTAGCACAATTTATATTTTCCCTCTCTTGCCTTTCTTATTT
 GCAATAAAAGGTATTGAGCCATTTTTTAAATGACATTTTGTATAAATTATGTTTGT
 ACTAGTTGATGAAGGAGTTTTTTTTTAACCTGTTTATATAATTTTGCAGCAGAAGCC
 AAATTTTTTGTATATTAAAGCACCAATTCATGTACAGCATGCATCACGGATCAA
 35 TAGACTGTACTTATTTTCCAATAAAATTTTCAAACCTTGTACTGTAAAA

SEQ ID NO: 500

>14870 BLOOD 470771.8 J05038 g190823 Human ras-related C3 botulinum toxin substrate (rac) mRNA, complete cds. 0

40 CTAGATCGCGAGCGGCCATTTCCCTGTTTCTCTGCAGTTTTCCCTCAGCTTTGGGTGG
 TGGCCGCTGCCGGGCATCGGCTTCAGTCCGCGGAGGGCGAGGCGGCGTGGACA
 GCGGCCCCGGCACCCAGCGCCCCGCCGCCGCAAGCCGCGCGCCCGTCCGCCGC
 GCCCCGAGCCCGCCGCTTTCCTATCTCAGCGCCCTGCCGCCGCCGCCGCCGCCAG
 CGAGCGGCCCTGATGCAGGCCATCAAGTGTGTGGTGGTGGGAGACGGAGCTGTA
 45 GGTAAAACTTGCCTACTGATCAGTTACACAACCAATGCATTTCCCTGGAGAATATA
 TCCCTACTGTCTTTGACAATTATTCTGCCAATGTTATGGTAGATGGAAAACCGGT
 GAATCTGGGCTTATGGGATACAGCTGGACAAGAAGATTATGACAGATTACGCCC
 CCTATCCTATCCGCAAACAGATGTGTTCTTAATTTGCTTTTCCCTTGTGAGTCCTG
 CATCATTTGAAAATGTCCGTGCAAAGTGGTATCCTGAGGTGCGGCACCACTGTCC

CAACACTCCCATCATCCTAGTGGGAACTAAACTTGATCTTAGGGATGATAAAGAC
ACGATCGAGAACTGAAGGAGAAGAAGCTGACTCCCATCACCTATCCGCAGGGT
CTAGCCATGGCTAAGGAGATTGGTGCTGTAAAATACCTGGAGTGCTCGGCGCTCA
CACAGCGAGGCCTCAAGACAGTGTGTTGACGAAGCGATCCGAGCAGTCCTCTGCC
5 CGCCTCCCGTGAAGAAGAGGAAGAGAAAATGCCTGCTGTTGTAAATGTCTCAGC
CCCTCGTTCTTGGTCTGTCCCTTGGAACTTTGTACGCTTTGCTCAAAAAAANC
AAAACAAAANAACAAAAANTAACAACGGTGGAGCCTTCGCACTCAATGCCAACT
TTTTGTTACAGATTAATTTTTCCATAAAACCATTTTTTGAACCAATCAGTAATTTT
AAGGTTTTGTTTGTCTAAATGTAAGAGTTCAGACTCACATTCTATTAATAATTTAG
10 CCCTAAAATGACAAGCCTTCTTAAAGCCTTATTTTTCAAAGCGCCCCCCCCATT
CTTGTTTCAGATTAAGAGTTGCCAAAATACCTTCTGAACTACACTGCATTGTTGTG
CCGAGAACACCGAGCACTGAACTTTGCAAAGACCTTCGTCTTTGAGAAGACGGT
AGCTTCTGCAGTTAGGAGGTGCAGACACTTGCTCTCCTATGTAGTTCTCAGATGC
GTAAAGCAGAACAGCCTCCCGAATGAAGCGTTGCCATTGGAACCTACCAGTGGA
15 GTTAGCAGCACGTGTTCCCGACATAACATTGTACTGTAATGGAGTGAGCGTAGCA
GCTCAGCTCTTTGGATCAGTCTTGTGATTTTCATAGCGAGTTTTCTGACCAGCCCTC
TTTGCCGGCAGCACTTTCTGAACCAGCACANCTGCTTACTTTCCCTCCTAACTGAA
CGAACTTCCTGCTATTACGCCTTGCTGCGCGCTGCTAGCCCGAGCGCCTGCGCGC
GTCTGTCTAGCTTGCTGCACCTCCACACACGCGCATCCACACACGCATCTACGTC
20 TACTTTCTCTGCAGCCACACACAACCTATCCGCACACGCTGCGACGCACTCTTACC
ACTTACCCTTGGTACCAACGGCAACTGCAAAGCTGTACGGCGTAACAAACCTC
TTACAAACGGTTAACTCTTCTGCTCAAACCTGCAGCTACGATGACTGCAAAGAAAG
CGTTGGCTATTATCACGGAAAGTGTTTTCTCTAAGCCTTTTCGCTTCTCTTACAC
CTGCCATGCCTCCCCAAATTGGGCATTTAATTCATCTTTAAACTGGTTGTTCTGTT
25 AGTCGCTAACTTAGTAAGTGCTTTTCTTATAGAACCCTTCTGACTGAGCAATAT
GCCTCCTTGTAATTATAAAATCTTTCTGATAATGCATTAGAAGGTTTTTTTGTGAT
TAGTAAAAGTGCTTTCCATGTTACTTTATTCAGAGCTAATAAGTGCTTTCTTAGT
TTTCTAGTAACTAGGTGTAAAAATCATGTGTTGCAGCTATAGTTTTTAAATATTT
TAGATATTCTTAAACTATGAACCTTCTTAACATCACTGTCTTGCCAGATTACCGAC
30 ACTGTCACTTGACCAATAC

SEQ ID NO: 501

>14871 BLOOD 232589.59 AF077208 g4679029 Human HSPC022 mRNA, complete cds. 0

CTCCTGCCCCACCACCGCTGCTCCTCAGCAGGCGCCTCACCAGCCTCCACACCCC
35 TTGCGCCCGCAGAAACGCGCCTGGGCCCTGAGCTGTGCACCACCGACACTCTCCA
GGCTCCGGACACGATGCAGGCCATCAAGTGTGTGGTGGTGGGAGATGGGGCCGT
GGGCAAGACCTGCCTTCTCATCAGCTACACCACCAACGCCTTTCCCGGAGAGTAC
ATCCCCACCGTGTTTGACAACTATTCAGCCAATGTGATGGTGGACAGCAAGCCAG
TGAACCTGGGGCTGTGGGACACTGCTGGGCAGGAGGACTACGACCGTCTCCGGC
40 CGCTCTCCTATCCACAGACGGACGTCTTCCTCATCTGCTTCTCCCTCGTCAGCCCA
GCCTCTTATGAGAACGTCCGCGCCAAGTGGTTCCAGAAAGTGCGGCACCACTGCC
CCAGCACACCCATCATCTGTTGGGCACCAAGCTGGACCTGCGGGACGACAAGG
ACACCATCGAGAACTGAAGGAGAAGAAGCTGGCTCCCATCACCTACCCGCAGG
GCCTGGCACTGGCCAAGGAGATTGACTCGGTGAAATACCTGGAGTGCTCAGCTCT
45 CACCCAGAGAGGCCTGAAAACCGTGTTTCGACGAGGCCATCCGGGCCGTGCTGTG
CCCTCAGCCCACGCGGCAGCAGAAGCGCGCCTGCAGCCTCCTCTAGGGGTTGCA
CCCCAGCGCTCCCACCTAGATGGGTCTGATCCTCCAGGATCCCCACCCAAAGCCT
GATGGCACCCCGGCTGGCCATGCTGTCCCTCCCTGTGGCGTTTCTTAGCAGATG
GCTGCAGAGCTTCGTTGATGGTCTTTTCTGTACTGGAGGCCTCCTGAGGCCAGGA

ACGTGCAAATTTGCAGGTGCTGCATCCCAAGCCCCCTCATGCTCCTGCCTTCCTGA
 GGGCCAGAGGGGAGCCCCAGGACCCATTAAGCCACCCCCGTGTTCTGCCGTCA
 GTGCCAACTGCCGCATGTGGAAGCATCTACCCGTTCACTCCAGTCCCACCCACG
 CCTGACTCCCCTCTGGAAACTGCAGGCCAGATGGTTGCTGCCACAACCTTGTGTAC
 5 CTTCAGGGATGGGGCTCTTACTCCCTCCTGAGGCCAGCTGCTCTAATATCGATGG
 TCCTGCTTGCCAGAGAGTTCTCTACCCAGCAAAAATGAGTGTCTCAGAAGTGTG
 CTCCTCTGGCCTCAGTTCTCCTCTTTTGGAAACAACATAAAACAAATTTAATTTTCT
 ACGCCTCTGGGGATATCTGCTCAGCCAATGGAAAATCTGGGTTCAACCAGCCCCT
 GCCATTTCTTAAGACTTTTCTGCTGCACTCACAGGATCCTGAGCTGCACTTACCTGT
 10 GAGAGTCTTCAAACCTTTTAAACCTTGCCAGTCAGGACTTTTGCTATTGCAAATAG
 AAAACCCAACTCAACCTGCTTAAGCAGAAAATAAATTTATTGATTCAAAAAAAAA
 AAA

SEQ ID NO: 502

15 >14873 BLOOD 462958.2 M30471 g178133 Human class III alcohol dehydrogenase
 (ADH5) chi subunit mRNA, complete cds. 0
 CGTCAGTGCGCGGCCACCCCCGGATGTCAGCCCCCGCGCCGACCAGAATCCGT
 GAAACATGGCGAACGAGGTTATCAAGTGGCAAGGCTGCAGTTGCTTGGGAGGCT
 GGAAAGCCTCTGCTCCATAGAGGAGATAGAGGTGGCACCCCCAAAGGCTCATGA
 20 AGTTCGAATCAAGATCATTGCCACTGCGGTTTGGCCACACCGATGCCTATACCCT
 GAGTGGAGCTGATCCTGAGGGTTGTTTTCCAGTGATCTTGGGACATGAAGGTGCT
 GGAATTGTGGAAAGTGTTGGTGAGGGAGTTACTAAGCTGAAGGCGGGTGACACT
 GTCATCCCACCTTACATCCCACAGTGTGGAGAATGCAAATTTTGTCTAAATCCTA
 AAACCTAACCTTTGCCAGAAGATAAGAGTCACTCAAGGGAAAGGATTAATGCCAG
 25 ATGGTACCAGCAGATTTACTTGCAAAGGAAAGACAATTTTGCATTACATGGGAA
 CCAGCACATTTTCTGAATACACAGTTGTGGCTGATATCTCTGTTGCTAAAATAGA
 TCCTTTAGCACCTTTGGATAAAGTCTGCCTTCTAGGTTGTGGCATTTC AACCGGTT
 ATGGTGCTGCTGTGAACACTGCCAAGTTGGAGCCTGGCTCTGTTTGTGCCGTCTTT
 GGTCTGGGAGGAGTCGGATTGGCAGTTATCATGGGCTGTAAAGTGGCTGGTGCTT
 30 CCCGGATCATTGGTGTGGACATCAATAAAGATAAATTTGCAAGGGGCCAAAGAGT
 TTGGAGCCACTGAATGTATTAACCCTCAGGATTTTAGTAAACCCATCCAGGAAGT
 GCTCATTGAGATGACCGATGGAAGAGTGGACTATTCCTTTGAATGTATGGTAATG
 TGAAGGTCATGAGAGCAGCACTTGAGGCATGTCACAAGGGCTGGGGCGTCAGCG
 TCGTGGTTGGAGTAGCTGCTTCAGGTGAAGAAATTGCCACTCGTCCATTCCAGCT
 35 GGTAACAGGTCGCACATGGAAAGGCACTGCCTTTGGAGGATGGAAGAGTGTAGA
 AAGTGTCCCAAAGTTGGTGTCTGAATATATGTCCAAAAGATAAAAGTTGATGA
 ATTTGTGACTCACAATCTGTCTTTTGATGAAATCAACAAAGCCTTTGAACTGATG
 CATTCTGGAAAGAGCATTTCGAACTGTTGTAAAGATTTAATTCAAAAGAGAAAAA
 TAATGTCCATCCTGTCTGATGTGATAGGAGCAGCTTAACAGGCAGGGAGAAGC
 40 GCCTCCAACCTCACAGCCTCGTAGAGCTTCACAGCTACTCCAGAAAATAGGGTTA
 TGTGTGTCATTATGAATCTCTATAATCAAGGACAAGGATAATTCAGTCATGAAC
 CTGTTTTCTGGATGCTCCTCCACATAAATAATTGCTAGTTTATTAAGGAATATTTT
 AACATAATAAAAGTAATTTCTACATTTGTGTGGAAATTGTCTTGTTTATGCTGTC
 ATCATTGTACGGTTTGTCTGCCATTATCTTCATTCTGCAAGGGAAAGGGAAAG
 45 GAAGCAGGGCAGTGGTGGGTGTCTGAAACCTCAGAAACATAACGTTGAACTTTT
 AAGGGTCTCAGTCCCCGTTGATTAAAGAACAGATCCTAGCCATCAGTGACAAAG
 TTAATCAGGACCCAAGTCTGCTTCTGTGATATTATCTTTAAGGGAGGTAAGTGTGC
 CTTGTTTACATCCTGTACCCCAAATTCCTAGGATGGCATCTGCCCTTCAGGGGGCA
 CTAATAATGTATTATTGAAACAGCATTCTGGGCTTAAATAGGTGTATGTATGTGT

GGTTGTGACTGTACTATTTCTAGTATAGTGAACCTACATACTGAATATCCAAGTTCT
CAGCACCTACTTTTGTCAAATCTTAACATTTTGCCACTTCGAGATCACATTGCCAT
TCCTCCCCTCCAGAGGTAACAATTATCCACAATTTGATGTTTATCATTCTGTGTT
GTTGTACTTTTACTGTGTATAACCTAAACCATCTACTCTTTAGTACTGTTTTATAT
5 ATTTTAAAGCCTCATACTTGCTCATTCTACAGCTTTTTTCACTCATTATTGTATAAT
TATATCTGAAGCTCTCGTTCATTAATTTTAGTCCTGTGTAGCAGAATTCAATTACG
GGAACCTACCATAATTTATCTGTTCTCCAGTTGAAGGCATGAAGTTGTTGCCAGTT
TCTGTATTATAACACTGTAGTGGAACATTCTTCTGCATTGGGCTCACTGCGTGTTA
CCTAAGACGTATCACAGAATAAACACATTTAGCCTTATAGACATTGCCAAATTGC
10 TCTTCAAAGTAAATGTGAGTTTTTGTGAATTACATGAGTATGGAATGGTGTGTTTAT
TATGACTTTAGTTTGCATTTTCTCAATTCTCGTTAAATCCTTCATTCTAATGGAC
ATTTTATTGTGAAGAACCTGTTTCATATCCTGTGCTCAACTTTGTATTGAATTATTT
TTCTCTGAATAATTTTTAGGAGTTCTTTTATTCTAGACATCAATCATTGTGAGTTT
TATATGTTGCAAATATCTTCTAGTCTATCTTGTGACTTTTCTTTTTACTTTATGGTA
15 TTTTGTGATAAAGTTTTAATGTAGTCACATAAAAAAGATGACTAAGAGGGAG
GACGTTTGGGAGGGGAAAGAGTGTGGGGTGTGGAGATGTGAGCACGCGGCGGG
GCGCTGAGGGGGGGAGCGCGGGAAGTGCGGACGAGGGAGAAAAGAGGGGGGG
CGGCGCGCGGGTCTGGGGTGGGAGGCGTTTGAGGGCACCCGGGGCATGGAGAGCC
CGCTGGTGCAGGGGCAGCGCGGGAGGGTGGAGCGAGGGTGTGCCCCGAGTAT
20 GGGCGAGTCCGGTGTAGAGTCTTGTGGGAGGATGTGCGTGGGAGGAGAGGGC
GGTTGTGCCGCGCGGGTACCGCGCGTGTGATGAAGGTTGTAGAACGCGCCCCC
GAGAATGGCATGCCGGTGTGCATGTGAGAGTGGTCTGGGGGGG

SEQ ID NO: 503

25 >14882 BLOOD 113621.5 AL110197-g5817115 Human mRNA; cDNA DKFZp586J021
(from clone DKFZp586J021). 0
AGCCCCCGGCCCGCCATGGGCGCCGCGGCCCGCACCCCTGCGGCTGGCGCTCGG
CCTCCTGCTGCTGGCGACGCTGCTTCGCCCCGCCGACGCCTGCAGCTGCTCCCCG
GTGCACCCGCAACAGGCGTTTTGCAATGCAGATGTAGTGATCAGGGCCAAAGCG
30 GTCAGTGAGAAGGAAGTGGACTCTGGAAACGACATTTATGGCAACCCTATCAAG
AGGATCCAGTATGAGATCAAGCAGATAAAGATGTTCAAAGGGCCTGAGAAGGAT
ATAGAGTTTATCTACACGGCCCCCTCCTCGGCAGTGTGTGGGGTCTCGCTGGACG
TTGGAGGAAAGAAGGAATATCTCATTGCAGGAAAGGCCGAGGGGGACGGCAAG
ATGCACATCACCCCTCTGTGACTTCATCGTGCCCTGGGACACCCTGAGCACCAACC
35 AGAAGAAGAGCCTGAACCACAGGTACCAGATGGGCTGCGAGTGCAAGATCACGC
GCTGCCCCATGATCCCGTGCTACATCTCCTCCCCGGACGAGTGCCTCTGGATGGA
CTGGGTACAGAGAAGAACATCAACGGGCACCAGGCCAAGTTCTTCGCTGCAT
CAAGAGAAGTGACGGCTCCTGTGCGTGGTACCGCGGCGCGGCCCCCCCAAGCA
GGAGTTTCTCGACATCGAGGACCCATAAGCAGGCCTCCAACGCCCTGTGGCCA
40 ACTGCAAAAAAAGCCTCCAAGGGTTTCGACTGGTCCAGCTCTGACATCCCTTCCT
GGAAACAGCATGAATAAAACACTCATCCCATGGGTCCAAATTAATATGATTCTGC
TCCCCCTTCTCCTTTTAGACATGGTTGTGGGTCTGGAGGGAGACGTGGGTCCAA
GGTCTCATCCCATCCTCCCTCTGCCAGGCACTATGTGTCTGGGGCTTCGATCCTT
GGGTGCAGGCAGGGCTGGGACACGCGGCTTCCCTCCCAGTCCCTGCCTTGGCACC
45 GTCACAGATGCCAAGCAGGCAGCACTTAGGGATCTCCCAGCTGGGTTAGGGCAG
GGCCTGGAAATGTGCATTTTGCAGAACTTTTGAGGGTCGTTGCAAGACTGTGTA
GCAGGCCTACCAGGTCCCTTTCATCTTGAGAGGGACATGGCCCTGTTTTCTGCA
GCTTCCACGCCTCTGCACTCCCTGCCCCTGGCAAGTGCTCCCATCGCCCCGGTGC
CCACCATGAGCTCCCAGCACCTGACTCCCCCACATCCAAGGGCAGCCTGGAACC

AGTGGCTAGTTCTTGAAGGAGCCCCATCAATCCTATTAATCCTCAGAATTCCAGT
 GGGAGCCTCCCTCTGAGCCTTGTAGAAATGGGAGCGAGAAACCCAGCTGAGCT
 GCGTTCAGCCTCAGCTGAGTCTTTTTGGTCTGCACCCACCCCNANCCTGCTCC
 CCGCCACATGCTCCCCAGCTTGAGGAGGAATCGGTGAGGTCCTGTCTGAGGC
 5 TGCTGTCCGGGGCCGGTGGCTGCCCTCAAGGTCCCTTCCCTAGCTGCTGCGGTTG
 CCATTGCTTCTTGCTGTTCTGGCATCAGGCACCTGGATTGAGTTGCACAGCTTTG
 CTTTATCCGGGCTTGTGTGCAGGGCCCGGCTGGGCTCCCCATCTGCACATCCTGA
 GGACAGAAAAAGCTGGGTCTTGTGTGCCCTCCCAGGCTTAGTGTTCCCTCCCTC
 AAAGACTGACAGCCATCGTTCTGCACGGGGCTTTCTGCATGTGACGCCAGCTAAG
 10 CATAGTAAGAAGTCCAGCCTAGGAAGGGAAGGATTTTGGAGGTAGGTGGCTTTG
 GTGACACACTCACTTCTTTCTCAGCCTCCAGGACACTATGGCCTGTTTTAAGAGA
 CATCTTATTTTTCTAAAGGTGAATTCTCAGATGATAGGTGAACCTGAGTTGCAGA
 TATACCAACTTCTGCTTGTATTTCTTAAATGACAAAGATTACCTAGCTAAGAAAC
 TTCCTAGGGAAGTGGGAACCTATGTGTTCCCTCAGTGTGGTTTCCTGAAGCCAG
 15 TGATATGGGGGTAGGATAGGAAGAACTTTCTCGGTAATGATAAGGAGAATCTC
 TTGTTTCCCTCCCACCTGTGTTGTAAAGATAAACTGACGATATACAGGCACATTAT
 GTAAACATACACACGCAATGAAACCGAAGCTTGGCGGCCTGGGCGTGGTCTTGC
 AAAATGCTTCCAAAGCCACCTTAGCCTGTTCTATTACGCGGCAACCCCAAAGCAC
 CTGTTAAGACTCCTGACCCCCAAGTGGCATGCAGCCCCCATGCCACCGGGACCT
 20 GGTGAGCACAGATCTTGATGACTTCCCTTTCTAGGGCAGACTGGGAGGGTATCCA
 GGAATCGGCCCTGCCCCACGGGCGTTTTTCATGCTGTACAGTGACCTAAAGTTGG
 TAAGATGTCATAATGGACCAGTCCATGTGATTTTCAGTATATACTCCACCAGA
 CCCCTCCAACCCATATAACACCCACCCCTGTTTCGCTTCCTGTATGGTGATATCAT
 ATGTAACATTTACTCCTGTTTCTGCTGATTGTTTTTTAATGTTTTGGTTTGT
 25 GACATCAGCTGTAATCATTCTGTGCTGTGTTTTTTATTACCCTTGGTAGGTATTA
 GACTTGCACTTTTTTTAAAAAAGGTTTCTGCATCGTGGAAGCATTTGACCCAGA
 GTGGAACGCGTGGCCTATGCAGGTGGATTCTTCAGGTCTTTCCTTTGGTTCTTTG
 AGCATCTTTGCTTTCATTCTCTCCGCTTTTGGTTCTCCAGTTCAAATTATTGCA
 AAGTAAAGGATCTTTGAGTAGGTTTCGGTCTGAAAGGTGTGGCCTTTATATTTGAT
 30 CCACACACGTTGGTCTTTTAACCGTGCTGAGCAGAAAACAAAACAGGTAAAGAA
 GAGCCGGGTGGCAGCTGACAGAGGAAGCCGCTCAAATACCTTCACAATAAATAG
 TGGCAATATATATATAGTTTAAGAAGGCTCTCCATTTGGCATCGTTTAATTTATAT
 GTTATGTTCTAAGCACAGCTCTCTTCTCCTATTTTCATCCTGCAAGCAACTCAAAA
 TATTTAAAATAAAGTTTACATTGTAGTTATTTTCAAATCTTTGCTTGATAAGTATT
 35 AAGAAATATTGGACTTGCTGCCGTAATTTAAAGCTCTGTTGATTTTGTTCGGTTT
 GGATTTTGGGGGAGGGGAGCACTGTGTTTATGCTGGAATATGAAGTCTGAGACC
 TTCCGGTGCTGGGAACACACAAGAGTTGTTGAAAGTTGACAAGCAGACTGCGCA
 TGTCTCTGATGCTTTGTATCATTCTTGAGCAATCGCTCGGTCCGTGGACAATAAAC
 AGTATTATCAAAGAATGATACAAAGCATCAGAGACATGCGCAGTCTGCTTGTCA
 40 ACTTTCAACAACTCTTGTGTG

SEQ ID NO: 504

>14911 BLOOD 337076.6 M36089 g340396 Human DNA-repair protein (XRCC1) mRNA,
complete cds. 0

45 TAATACAGCAAAAAGATTTGCTTTTCTCGGCTTCAGTGTGGGCGGTAACTCCATCG
 TGCAATGAGAAAGGCGAATTTCTTCCAGACACCAATCCCGGAGGTCGCTTCTGTT
 GCTAGGCTCCAGAAAGCAGGGTTCGGACGTCATTGGGAGGCGAGGCTAGAGCG
 GGGTTGTGTGTGGCGGAGGGAGGCGGGGCTGGAGGAAACGCTCGTTGCTAAGGA
 ACGCAGCGCTCTTCCCGCTCTGGAGAGGCGCGACTGGGCTTGCGCAGTGTGACG

CCGGCGCCGGCGCGCCGGGGTTTGAAAGGCCCGAGCCTCGCGCGCTTGCGCACT
TTAGCCAGCGCAGGGCGCACCCCGCTCCCTCCCACTCTCCCTGCCCCCTCGGACCC
CATACTCTACCTCATCCTTCTGGCCAGGCGAAGCCACGACGTTGACATGCCGGA
GATCCGCCTCCGCCATGTCGTGTCCTGCAGCAGCCAGGACTCGACTCACTGTGCA
5 GAAAATCTTCTCAAGGCAGACACTTACCGAAAATGGCGGGCAGCCAAGGCAGGC
GAGAAGACCATCTCTGTGGTCCTACAGTTGGAGAAGGAGGAGCAGATACACAGT
GTGGACATTGGGAATGATGGCTCAGCTTTCGTGGAGGTGCTGGTGGGCAGTTCAG
CTGGAGGCGCTGGGGAGCAAGACTATGAGGTCCTTCTGGTCACCTCATCTTTCAT
GTCCCCTTCCGAGAGCCGCACTGGCTCAAACCCCAACCGCGTTCGCATGTTTGGG
10 CCTGACAAGCTGGTCCGGGCAGCCGCCGAGAAGCGCTGGGACCGGGTCAAAATT
GTTTGCAGCCAGCCCTACAGCAAGGACTCCCCCTTTGGCTTGAGTTTTGTACGGT
TTCATAGCCCCCAGACAAAGATGAGGCAGAGGCCCGTCCCAGAAGGTGACAG
TGACCAAGCTTGGCCAGTTCCTGTGAAGGAGGAGGATGAGAGCGCCAACCTCTC
TGAGGCCGGGGGCTCTCTTCTCAGCCGGATCAACAAGACATCCCCAGTCACAGC
15 CAGCGACCCGGCAGGACCTAGCTATGCAGCTGCTACCCTCCAGGCTTCTAGTGCT
GCCTCCTCAGCCTCTCCAGTCTCCAGGGCCATAGGCAGCACCTCCAAGCCCCAGG
AGTCTCCCAAAGGGAAGAGGAAGTTGGATTTGAACCAAGAAGAAAAGAAGACC
CCCAGCAAACCACCAGCCAGCTGTCGCCATCTGTTCCCAAGAGACCTAAATTGC
CAGCTCCAACCTCGTACCCAGCCACAGCCCCAGTCCCTGCCCCGAGCACAGGGGG
20 CAGTGACAGGCAAACCCCGAGGAGAAGGCACCGAGCCAGACGACCCCGAGCT
GGCCCAGAGGAGCTGGGGAAGATCCTTCAGGGTGTGGTAGTGGTGTGAGTGGC
TTCCAGAACCCCTTCCGCTCCGAGGCTGGGAGATAAGGCCCTAGAGCTTGGGGCCA
AGTATCGGCCAGACTGGACCCGGGACAGCAGCACCTCATCTGTGECTTTGCCAA
CACCCCAAGTACAGCCAGGTCTAGGCTGGGAGGCCGCATCGTGCCTAAGGA
25 GTGGGTGCTGGACTGTCACCGCATGCGTCGGCGGCTGCCCTCCCAGAGGTACCTC
ATGGCAGGGCCAGGTTCCAGCAGTGAGGAGGATGAGGCCTCTCACAGCGGTGGC
AGCGGAGATGAAGCCCCCAAGCTTCCTCAGAAGCAACCCCAAGCAAAACCAAG
CCCACTCAGGCAGCTGGACCCAGCTCACCCCAAGCCCCCAACCCCTGAAGAG
ACCAAAGCAGCCTCACCAGTGCTCCAGGAAGATATAGACATTGAGGGGGTACAG
30 TCAGAAGGACAGGACAATGGGGCGGAAGATTCTGGGGACACAGAGGATGAGCT
GAGGAGGGTGGCAGAGCAGAAGGAACACAGACTGCCCCCTGGCCAGGAGGAGA
ATGGGGAAGACCCGTATGCAGGCTCCACGGATGAGAACACGGACAGTGAGGAA
CACCAGGAGCCTCCTGATCTGCCAGTCCCTGAGCTCCCAGATTTCTTCCAGGGCA
AGCACTTCTTTCTTTACGGGGAGTTCCCTGGGGACGAGCGGCGGAACTCATCCG
35 ATACGTCACAGCCTTCAATGGGGAGCTCGAGGACTATATGAGTGACCGGGTTCA
GTTTGTGATCACAGCACAGGAATGGGATCCCAGCTTTGAGGAGGCCCTGATGGA
CAACCCCTCCCTGGCATTTCGTTTCGTCCTCCGATGGATCTACAGTTGCAATGAGAAG
CAGAAGTTACTTCCTCACCAGCTCTATGGGGTGGTGCCGCAAGCCTGAAGTATGT
GCTATAC

40

SEQ ID NO: 505

>14916 BLOOD 337528.6 M37763 g189300 Human neurotrophin-3 (NT-3) gene, complete
cds. 0

45

GCTGGGTGGAGGGAACGACTCGGCAGCCTCTTCTGGCCCTGAGGAAGACGTCGA
TATTTTGGCACGAGGGGAGCCACTGAAGGACTACCCTACCCTTGCGAGGGACCG
CAGGAGGTGACGCCCTGGGCCTCGGTGGGCGCTTCTGGCGGTTTTTCGATGTGGC
AACCCCATCAGCCAGGATAATGATGAGATCTTACAGGTGAACAAGGTGATGTC
CATCTTGTTTTATGTGATATTTCTCGCTTATCTCCGTGGCATCCAAGGTAACAACA
TGATCAAAGGAGTTTGCCAGAAGACTCGCTCAATTCCTCATTATTAAGCTGAT

CCAGGCAGATATTTTGA AAAACAAGCTCTCCAAGCAGATGGTGGACGTTAAGGA
 AAATTACCAGAGCACCCCTGCCCAAAGCTGAGGCTCCCCGAGAGCCGGAGCGGGG
 AGGGCCCCGCCAAGTCAGCATTCCAGCCGGTGATTGCAATGGACACCGAACTGCT
 GCGACAACAGAGACGCTACAACCTACCGCGGGTCTTGCTGAGCGACAGCACCCC
 5 CTTGGAGCCCCCGCCCTTGTATCTCATGGAGGATTACGTGGGCAGCCCCGTGGTG
 GCGAACAGAACATCACGGCGGAAACGGTACGCGGAGCATAAGAGTCACCGAGG
 GGAGTACTCGGTATGTGACAGTGAGAGTCTGTGGGTGACCGACAAGTCATCGGC
 CATCGACATTCGGGGACACCAGGTCACGGTGCTGGGGGAGATCAAAACGGGCAA
 CTCTCCCGTCAAACAATATTTTTATGAAACGCGATGTAAGGAAGCCAGGCCGGTC
 10 AAAAACGGTTGCAGGGGTATTGATGATAAACTGGAACCTCTCAGTGCAAAACA
 TCCCAAACCTACGTCCGAGCACTGACTTCAGAGAACAATAAACTCGTGGGCTGG
 CGGTGGATACGGATAGACACGTCCTGTGTGTGTGCCTTGTGAGAAAAATCGGA
 AGAACATGAATTGGCATCTCTCCCATATATAAATTATTACTTTAAATTATATGAT
 ATGCATGTAGCATATAAATGTTTATATTGTTTTATATATTATAAGTTGACCTTTA
 15 TTTATTAACTTCAGCAACCCTACAGTATATAAGCTTTTTTCTCAATAAAATCAGT
 GTGCTTGCCCTCCCTCAGGCCTCTCCCATCTGTTAAACTTGTTTTGTGATCCGGC
 TCTCAGGAGTCACTCTGTAAAATCTGTGTACACCAGTATTTTGCATTCAGTATTGT
 CAAGGCCATGACTGTTGTTTTAGTAAACTTGTTAAATCAGATGATGTCAGAGTT
 GTGTATAAACACAGTGTATATC

20

SEQ ID NO: 506

>14923 BLOOD 332483.1 M36634 g340264 Human vasoactive intestinal peptide (VIP)
 mRNA, complete cds.

ATAAAAATGATGGGCTTTGAAATGCTGGTCAGGGTAGAGTGAGAAGCACAGCAG
 25 GCAGTAACAGCCAACCCTTAGCCATTGCTAAGGGCAGAGAACTGGTGGAGCCTT
 TCTCTTACTCCCAGGACTTCAGCACCTAAGACAGCTCCAAAACAACCAGAACA
 GTCAGCTCCGGGGGAGCACCGACTGGGCGAGAGGCACAGAAATGGACACCAGA
 AATAAGGCCCAGCTCCTTGTGCTCCTGACTCTTCTCAGTGTGCTCTTCTCACAGAC
 TTCGGCATGGCCTCTTTACAGGGCACCTTCTGCTCTCAGGTTGGGTGACAGAATA
 30 CCCTTTGAGGGAGCAAATGAACCTGATCAAGTTTCATTAAAAGAAGACATTGAC
 ATGTTGCAAAATGCATTAGCTGAAAATGACACACCCTATTATGATGTATCCAGAA
 ATGCCAGGCATGCTGATGGAGTTTTACACAGTGACTTCAGTAAACTCTTGGGTCA
 ACTTTCTGCCAAAAAGTACCTTGAGTCTCTTATGGGAAAACGTGTTAGCAGTAAC
 ATCTCAGAAGACCCTGTACCAGTCAAACGTCCTCAGATGCAGTCTTCACTGACA
 35 ACTATACCCGCCTTAGAAAACAATGGCTGTAAAGAAATATTTGAACTCAATTCT
 GAATGGAAAGAGGAGCAGTGAGGGAGAATCTCCCGACTTCCAGAAGAGTTAGA
 AAAATGATGAAAAAGACCTTTGGAGCAAAGCTGATGACAACCTTCCCAGTGAATT
 CTTGAAGGAAAATGATACGCAACATAATTAAATTTTGAGTTCTACATAAGTAATT
 CAAGAAAACAACCTCAATATCCAAACCAAATAAAAAATATTGTGTTGTGAATGTTG
 40 TGATGTATTCTAGCTAATGTAATAACTGTGAAGTTTACATTGTAAATAGTATTTG
 AGAGTTCTAAATTTTGTCTTAACTCATAAAAAGCCTGCAATTTTCATATGCTGTAT
 ATCCTTTCTAACAAAAAATATATTTAATGATAAGTAAATGCTAGGTAAATTCCA
 ATTATATGAGACGTTTTTGGAGAGTAGTAATAGAGCAAAATTGATGTGTTTATT
 TATAGAGTGTACTTAACTATTCAGGAGAGTAGAACAGATAATCAGTGTGTCTAAA
 45 TTTGAATGTAAAGCAGATGGAATGCTGTGTTAAATAAACCTCAAAATGTCTAAGA
 TAGTAACAATGAAGATAAAAAGACATTCTTCCAAAAAGATTTTCAGAAAAATATT
 ATGTGTTTCCATATTTTATAGGCAACCTTTATTTTAAATGGTGTTTTAAAAAATCT
 CAAATTTGGATTGCTAATCACCAAAGGCTCTCTCCTGATAGTCTTTCAGTTAAGG
 AGAACGACCCCTGCTTCTGACACTGAACTTCCCTTCTGCTTGTGTTAAGTATGT

5

>14933 BLOOD 332882.1 X58377 g22952 Human mRNA for adipogenesis inhibitory factor. 0

10

15

20

25

30

35

40

45

TGACTGTCTCCAGGTCAAAGGAGAGAGGTGGGATTGTGGGTGACTTTTAATGTGT
ATGATTGTCTGTATTTTACAGAATTTCTGCCATGACTGTGTATTTTGCATGACACA
TTTTAAAAATAATAAACACTATTTTATAG

5 SEQ ID NO: 508

>14948 BLOOD 351209.16 X59960 g402620 Human mRNA for sphingomyelinase. 0

TCAGAGGAAGAGGAAGGGGCGGACTGCTTTGCGGCCGCGCCGCGGAGCAGTCAGC
CGACTACAGAGAAGGGTAATCGGGTGTCCCCGCGCCGCCCCGGGGCCCTGAGGG
CTGGCTAGGGTCCAGGCCGCGGGGGGACGGGACAGACGAACCAGCCCCGTGTAGG
10 AAGCGCGACAATGCCCCGCTACGGAGCGTCACTCCGCCAGAGCTGCCCCAGGTC
CGGCCGGGAGCAGGGACAAGACGGGACCGCCGGAGCCCCCGGACTCCTTTGGAT
GGGCCTGGCGCTGGCGCTGGCGCTGGCGCTGGCGCTGGCGCTGGCGCTGGCGCT
GGCTCTGTCTGACTCTCGGGTTCTCTGGGCTCCGGCAGAGGCTCACCTCTTTCTC
CCCAAGGCCATCCTGCCAGGTTACATCGCATAGTGCCCCGGCTCCGAGATGTCTT
15 TGGGTGGGGGAACCTCACCTGCCCAATCTGCAAAGGTCTATTCACCGCCATCAAC
CTCGGGCTGAAGAAGGAACCCAATGTGGCTCGCGTGGGCTCCGTGGCCATCAAG
CTGTGCAATCTGCTGAAGATAGCACCACTGCCGTGTGCCAATCCATTGTCCACC
TCTTTGAGGATGACATGGTGGAGGTGTGGAGACGCTCAGTGCTGAGCCCATCTGA
GGCCTGTGGCCTGCTCCTGGGCTCCACCTGTGGGCACTGGGACATTTTCTCATCTT
20 GGAACATCTCTTTGCCTACTGTGCCGAAGCCGCCCCCAAACCCCTAGCCCCC
AGCCCCAGGTGCCCTGTGAGCCGCATCCTCTTCTCACTGACCTGCACTGGGAT
CATGACTACCTGGAGGGGGACGGACCCCTGACTGTGCAGACCCACTGTGCTGCCG
CCGGGGTTCTGGCCTGCCGCCCCGCATCCCGGCCAGGTGCCGGATACTGGGGCGA
ATACAGCAAGTGTGACCTGCCCTGAGGACCCTGGAGAGCCTGTTGAGTGGGCT
25 GGGCCCAGCCGGCCCTTTTGATATGGTGTACTGGACAGGAGACATCCCCGCACAT
GATGTCTGGCACCAGACTCGTCAGGACCAACTGCGGGCCCTGACCACCGTCACA
GCACTTGTGAGGAAGTTCCTGGGGCCAGTGCCAGTGTACCCTGCTGTGGGTAACC
ATGAAAGCACACCTGTCAATAGCTTCCCTCCCCCTTCATTGAGGGCAACCACTC
CTCCCGCTGGCTCTATGAAGCGATGGCCAAGGCTTGGGAGCCCTGGCTGCCTGCC
30 GAAGCCCTGCGCACCCCTCAGAATTGGGGGGTTCTATGCTCTTTCCCATACCCCG
GTCTCCGCCTCATCTCTCTCAATATGAATTTTGTTCCTGAGAACTTCTGGCTC
TTGATCAACTCCACGGATCCCGCAGGACAGCTCCAGTGGCTGGTGGGGGAGCTTC
AGGCTGCTGAGGATCGAGGAGACAAAGTGCATATAATTGGCCACATTCCCCCAG
GGCACTGTCTGAAGAGCTGGAGCTGGAATTATTACCGAATTGTAGCCAGGTATG
35 AGAACACCCTGGCTGCTCAGTTCTTTGGCCACACTCATGTGGATGAATTTGAGGT
CTTCTATGATGAAGAGACTCTGAGCCGGCCGCTGGCTGTAGCCTTCCTGGCACCC
AGTGCAACTACCTACATCGGCCTTAATCCTGGTTACCGTGTGTACCAAATAGATG
GAAACTACTCCAGGAGCTCTCACGTGGTCCTGGACCATGAGACCTACATCCTGAA
TCTGACCCAGGCAAACATAACGGGAGCCATAACCGCACTGGCAGCTTCTCTACAG
40 GGCTCGAGAAACCTATGGGCTGCCCAACACACTGCCTACCGCCTGGCACAACT
GGTATATCGCATGCGGGGCGACATGCAACTTTTCCAGACCTTCTGGTTTCTCTAC
CATAAGGGCCACCCACCCTCGGAGCCCTGTGGCACGCCCTGCCGTCTGGCTACTC
TTTGTGCCAGCTCTCTGCCCCTGCTGACAGCCCTGCTCTGTGCCGCCACCTGATG
CCAGATGGGAGCCTCCCAGAGGCCAGAGCCTGTGGCCAAGGCCACTGTTTTGCT
45 AGGGCCCCAGGGCCACATTTGGGAAAGTTCTTGATGTAGGAAAGGGTGAAAAA
GCCCAAATGCTGCTGTGGTTCAACCAGGCAAGATCATCCGGTGAAAGAACCAGT
CCCTGGGCCCCAAGGATGCCGGGGAAACAGGACCTTCTCCTTTCCTGGAGCTGGT
TTAGCTGGATATGGGAGGGGGTTTGGCTGCCTGTGCCAGGAGCTAGACTGCCTT
GAGGCTGCTGTCCTTTCACAGCCATGGAGTAGAGGCCTAAGTTGACACTGCCCTG

GGCAGACAAGACAGGAGCTGTCGCCCCAGGCCTGTGCTGCCAGCCAGGAACCC
TGTACTGCTGCTGCGACCTGATGCTGCCAGTCTGTAAAAATAAGATAAGAGACT
TGGACTCCAAAAAAGG

5 SEQ ID NO: 509

>14954 BLOOD 289783.4 M38694 g339561 Human transforming growth factor-beta (tgf-beta) mRNA, complete cds. 0

GGAGTCCGTGGCGAGAGCGCGCTCAGCCCCGCCGCGATGCCCGCGCGCCCAGGA
CGCTCCTCCCGCTGCTGGCCCCGGCCGGCGTGCCTGACTGCGCTGCTCTTGACAGC
10 TGCTGGGTCATGGCGGCGGCGGGCGCTGGGGCGCCCCGGGCCAGGAGGCGGCGG
CGTGCGGCGGCGGACGGGCCCCCGCGGCAGACGGCGAGGACGGACAGGACCC
GCACAGCAAGCACCTGTACACGGCCGACATGTTACGCACGGGATCCAGAGCGC
CGCGCACTTCGTCATGTTCTTCGCGCCCTGGTGTGGACACTGCCAGCGGCTGCAG
CCGACTTGGAATGACCTGGGAGACAAATACAACAGCATGGAAGATGCCAAAGTC
15 TATGTGGCTAAAGTGGACTGCACGGCCCACTCCGACGTGTGCTCCGCCAGGGG
GTGCGAGGATACCCACCTTAAAGCTTTTCAAGCCAGGCCAAGAAGCTGTGAAG
TACCAGGGTCTCTCGGACTTCCAGACACTGGAAGTGGATGCTGCAGACACTG
AACGAGGAGCCAGTGACACCAGGGCCGGAAGTGGAACCGCCAGTGCCCCCGA
GCTCAAGCAAGGGCTGTATGAGCTCTCAGCAAGCAACTTTGAGCTGCACGTTGCA
20 CAAGGCGACCACTTTATCAAGTTCTTCGCTCCGTGGTGTGGTCACTGCAAAGCCC
TGGCTCCAACCTGGGAGCAGCTGGCTCTGGGCCTTGAACATTCCGAAACTGTCAA
GATFGGCAAGGTTGATTGTACACAGCACTATGAACTCTGCTCCGGAAACCAGGTT
CGTGGCTATCCCCTCTTCTCTGGTTCCGAGATGGGAAAAAGGTGGATCAGTACA
AGGGAAAGCGGGATTTGGAGTCACTGAGGGAGTACGTGGAGTCGACGCTGCAGC
25 GCACAGAGACTGGAGCGACGGAGACCGTCACGCCCTCAGAGGCCCGGTGCTGG
CAGCTGAGCCCGAGGCTGACAAGGGCACTGTGTTGGCACTCACTGAAAATAACT
TCGATGACACCATTGCAGAAGGAATAACCTTCATCAAGTTTTATGCTCCATGGTG
TGGTCATTGTAAGACTCTGGCTCCTACTTGGGAGGAACTCTCTAAAAAGGAATTC
CCTGGTCTGGCGGGGGTCAAGATCGCCGAAGTAGACTGCACTGCTGAACGGAAT
30 ATCTGCAGCAAGTATTCGGTACGAGGCTACCCACGTTATTGCTTTTCCGAGGAG
GGAAGAAAGTCAGTGAGCACAGTGGAGGCAGAGACCTTGACTCGTTACACCGCT
TTGTCTTGAGCCAAGCGAAAGACGAACTTTAGGAACACAGTTGGAGGTCACCTC
TCCTGCCAGCTCCCGCACCCCTGCGTTTAGGAGTTCACTCCACAGAGGCCACTG
GGTTCCCAGTGGTGGCTGTTTCAGAAAGCAGAACATACTAAGCGTGAGGTATCTTC
35 TTTGTGTGTGTGTTTTCCAAGCCAACACACTCTACAGATTCTTTATTAAGTTAAGT
TTCTCTAAGTAAATGTGTAACCTCATGGTCACTGTGTAAACATTTTCAGTGGCGAT
ATATCCCCTTTGACCTTCTCTTGATGAAATTTACATGGTTTCCTTTGAGACTAAAA
TAGCGTTGAGGGAAATGAAATTGCTGGACTATTTGTGGCTCCTGAGTTGAGTGAT
TTTGGTGAAAGAAAGCACATCCAAAGCATAGTTTACCTGCCCACGAGTTCTGGAA
40 AGGTGGCCTTGTGGCAGTATTGACGTTCCCTCTGATCTTAAGGTCACAGTTGACTC
AATACTGTGTTGGTCCGTAGCATGGAGCAGATTGAAATGCAAAAACCCACACCT
CTGGAAGATACTTCACGGCCGCTGCTGGAGCTTCTGTTGCTGTGAATACTTCTCT
CAGTGTGAGAGGTTAGCCGTGATGAAAGCAGCGTTACTTCTGACCGTGCCCTGAGT
AAGAGAATGCTGATGCCATAACTTTATGTGTGCGATACTTGTCAAATCAGTTACTG
45 TTCAGGGGATCCTTCTGTTTCTCACGGGGTGAAACATGTCTTTAGTTCTCATGTT
AACACGAAGCCAGAGCCCACATGAACTGTTGGATGTCTTCCTTAGAAAGGGTAG
GCATGGAAAATTCCACGAGGCTCATTCTCAGTATCTCATTAACTCATTGAAAGAT
TCCAGTTGTATTTGTACCTGGGGTGACAAGACCAGACAGGCTTTCCAGGCCTG
GGTATCCAGGGAGGCTCTGCAGCCCTGCTGAAGGGCCCTAACTAGAGTTCTAGA

GTTTCTGATTCTGTTTCTCAGTAGTCCTTTTAGAGGCTTGCTATACTTGGTCTGCTT
CAAGGAGGTCGACCTTCTAATGTATGAAGAATGGGATGCATTTGATCTCAAGACC
AAAGACAGATGTCAGTGGGCTGCTCTGGCCCTGGTGTGCACGGCTGTGGCAGCT
GTTGATGCCAGTGTCTCTAACTCATGCTGTCCTTGTGATTAAACACCTCTATCTC
5 CCTTGGAATAAGCACATACAGGCTTAAGCTCTAAGATAGATAGGTGTTTGTCTT
TTTACCATCGAGCTACTTCCCATAATAACCACTTTGCATCCAACACTCTTCACCCA
CCTCCCATAACGCAAGGGGATGTGGATACTTGGCCCAAAGTAACTGGTGGTAGGA
ATCTTAGAAACAAGACCACTTATACTGTCTGTCTGAGGCAGAAGATAACAGCAG
CATCTCGACCAGCCTCTGCCTTAAAGGAAATCTTTATTAATCACGTATGGTTCAC
10 AGATAATTCTTTTTTTTAAAAAAACCCAACCTCCTAGAGAAGCACAACTGTCAAGA
GTCTTGTACACACAACTTCAGCTTTGCATCACGAGTCTTGTATTCCAAGAAAATC
AAAGTGGTACAATTTGTTTGTTTACACTATGATACTTTCTAAATAAACTCTTTTTT
TTTAAAAGTCTGGTCTTTCCTTCAATGTTACAGCAAAACAGATATAAAATAGACA
ATAAATTATAGTTTATATTTACAAAAAAGCTGTAAGTGCAAACAGTTGTAGATT
15 ATAAATGTATTATTTAATCAGTTTAGTATGAAATTGCCTTCCCAGTACATGATTGT
GAAAAAGACATTTAGAAAATATTCTAAAATTTAATCTGAGCCTCACTTTCTACAA
GGGAAATCATGATTTCCGTTTATAAACAGCATGCTCATCCCCCTAACACCATTCT
TATAAGCTGGGCACCCTCATTTTATTTTCTTCGTTGGTTCTAACCCCTGTGGCGTGG
TATGCTGTATAGTAAAAAGGCAGAGAACCCTTTACTGAAAAGGTACTAGAGCC
20 GGCAGTCCAGAAGTTAATGTGCTGGTCAAAGAACCGTTCTGGTAAAGAAGAGGT
GAGCATTGCCTTCACGTGTTACACGGTTACACACCCCTTGTAGCCTCACCTCAGT
GTAATCAGTCTACTTTTGGTACTAGCAAAGAGTACAGCAAATGGAGGATTGAGG
TGTAGAAATGGTATGTTTGGCTGAAATAAGTGTATTTTCACACCAACAAAACCTC
CAGCAGGAACATACAAACAGCAATGACTGAGACAAAGGGCGCCCGTGGAGCCCTG
25 GCTGTGGCCTGGGCTGTGCGTCCTGTGGACTTCTGGGAATGAACTGAACAGAGGC
GTTCCCCCACTTCCCCGATTTCTGTTCTCTGTAAAATCTACCTTTGATAGACAGT
ACTGAACCAGCTGATCCTTTAGCCAAGAATACATTTAACTCCTTTGAGATTATTTT
CCCTATTTACTAACAACACCCCCAAATAGCTTGATCTACAGCTAAAATAATTTT
GGTGGGTTTTTTGGGGGAGGAGGGTAGGAAGAGCTTCACGGTTATGTTTCTGCAGT
30 TACCAGACCTTATGCTACAGACATCCAACTCAGCTTGCTACAGACCAACAATA
CTCACGTCATTTACCAAGTGAGCAAATTATTAATGAGGTCCTTTAAAATCTTCCT
GGGTAATAAGGCACTGGCATGAGATAGTTTCAAAGTCTCATCGTCCCACCTCCAA
CTGTGCTTCCGTGTTTTTTTAAAGGCAGATGTAATCTAGGAATCCAAGGCAGAATG
TGTGTCCCAGCATCTGGTTTCGAGTTAGTGGCATCCACAAGCTCTTACAACCAT
35 ATTCCTGTATTTTTTCAGAAATGACATTGGAGTTGTCATCAAAGTAAAGAACCGAG
ATGGCATTTAGCTTAGTTGGCGCACAGCACGGTTTGGGGACATACTCGGGGTTCA
TAAGGTGAACCAAGGTCTGCACAATCGCGTGGTTGGTTGCATTCATGTGTGCGTT
GAGTGGGAAGGAGCATTCTCCATCACAGTAATTGGCAGCATAGCCCTTGGGTGC
AATGATCCAGTCCTGCCATCCCAGGTCTTGAAACTCACATACAGCTCATGCTTC
40 CTGCAGGCTGTTTTCAATTCAGTCTGTTGTAATCTGAAGCACTGGAGACCCGCG
CCACGTCTTGGGACTGGGTAGAGCGATTACGACTCTGTTGTCGGCGCCGGCTGGA
GGCTGACCTGGTGGTGCGCACGTGGACCTCACTCACTTTGAAGAAAGCCACCATG
AAGGGCTGCTTGTGCTAAGGGCCGTCTCTGCCACCAGGCCTGCGGCTCGGGGGT
GGACGTGGACTCCATCCCTTGTCAACACGCTCAGCTGAAGCCCCATGTTATGCTG
45 TGGAGTCACAACCCACAGATTGCTAGTGGCCGTGATGTCAAATTCAGCCAGCCT
TCTTCTGAGGCCATACTACACGGGTGTCCAACAAAAACAGGTCAGAGTCTCTGT
GCTGATGCTCCTGTAAGACTTGATAAATGCTGATAAGAAAAGTTTGGTTTTTAAA
ACTCCCCATAACACAGTCCTTGTAGATGCGGAATTCTGCAGCCGTCACCACCTCA
CCCTCAGGAATCTGGGATAAGTTGAACTTGAACCTCTTTGTGGTGTGCTGACGAG

GGGAGAACTCCTTGTCGTA CTCCACCAGGTT CACAAAGCTCATGACCATGTCCGC
 GTCGTTGAGGAAGGCGCTGTCCTGCGCGCTGGTCAGTGGGGACGCGCCGCGCT
 GCCAGATCCGGGGGCCAGAAGGCTCTTGCGGTTGAGCGGGTGCGCGGCGCCCGG
 GGGCGGCTGCCGACGCTGGGACGAGCTGGCTGCTTCGTGGGGCCAGGACTGCTG
 5 CCTCTCCCCCTCCGACGCCCCGTCTCGTCGTTGTCGGCGGACAGGGCGTTGTAC
 AGATCCAGCATGAAGAGGGGCGCGGACTTCAGTCGCCCCGGAGGGGGCTCTCCG
 CGAGGCAGCTGCTGCTGCTGCTGCTGCTCCTCCTGCTGCCGGAGCGCCGGGGGCT
 GCGGCTGTTGGAGGCCGTGCAGGGGCCGGGGCCGGTGCGGGAGCCCCAGCACCG
 ACAAGATCTCCTTCTGCATCTCCCGCTTCTCCTGCGTCTTGAGCCGCCGGTACAGG
 10 AAGCCCGAGGAGGACTGCGGCGACGGCGGCGGCTGCTCCGTGCGGCCGGGGCTC
 CCGCCGTCCCCCAGCAGCTGCCCCCGGCGGCGGCGGCGGCGGCGGCGGCGGCAAG
 GGCGGCCGCAGCGGCGGGGGGCCCGCAGCAGCTGCACAGCAGCCCCACCACCAG
 CACAGCCACTGCGCCCTCCGCCCCAGCCCCGGCATCCCCGCCCGGGCGGGCTGCC
 CCCGCGGATCCCGCGAGGCGTGGAGCGGCGGAGCGAGGCCGGAGCGCGGCCGCT
 15 GTGGCCCTTGGCGTGAGCAGTCCCCGCCACCTCTCGGCGGGCTCGCTTCCCC

SEQ ID NO: 510

>14959 BLOOD 995976.15 M25295 g186738 Human keratinocyte growth factor mRNA,
complete cds. 0

20 AGCACACACGCGCTCACACACAGAGAGAAAATCCTTCTGCCTGTTGATTTATGGA
 AACAATTATGATTCTGCTGGAGAACTTTTCAGCTGAGAAATAGTTTGTAGCTACA
 GTAGAAAGGCTCAAGTTGCACCAGGCAGACAACAGACATGGAATTCTTATATAT
 TCCAGCTGTTAGCAACAAAACAAAAGTCAAATAGCAAACAGCGTCACAGCAACTG
 TAACTTACTACGAAGTGTCTTTTATGAGGATTTATCAACAGAGTTATTTAAGGAGGA
 25 ATCTGTGTTGTTATCAGGAATAAAAGGATAAGGCTAACAATTTGGAAAGAGC
 AACTACTCTTTCTTAAATCAATCTACAATTCACAGATAGGAAGAGGTCAATGACC
 TAGGAGTAACAATCAACTCAAGATTCATTTTCATTATGTTATTCATGAACACCCG
 GAGCACTACACTATAATGCACAAATGGATACTGACATGGATCCTGCCAACTTTGC
 TCTACAGATCATGCTTTCACATTATCTGTCTAGTGGGTACTATATCTTTAGCTTGC
 30 AATGACATGACTCCAGAGCAAATGGCTACAAATGTGAACTGTTCCAGCCCTGAG
 CGACACACAAGAAGTTATGATTACATGGAAGGAGGGGATATAAGAGTGAGAAG
 ACTCTTCTGTGCAACACAGTGGTACCTGAGGATCGATAAAAGAGGCAAAGTAAA
 AGGGACCCAAGAGATGAAGAATAATTACAATATCATGGAAATCAGGACAGTGGC
 AGTTGGAATTGTGGCAATCAAAGGGGTGGAAGTGAATTCTATCTTGCAATGAA
 35 CAAGGAAGGAAAATCTATGCAAAGAAAGAATGCAATGAAGATTGTAACCTCAA
 AGAACTAATTCTGGAAAACCATTACAACACATATGCATCAGCTAAATGGACACA
 CAACGGAGGGGAAATGTTTGTTCCTTAAATCAAAGGGGATTCCTGTAAGAGG
 AAAAAAAACGAAGAAAGAACAAAAAACAGCCCCTTTCTTCCTATGGCAATAAC
 TTAATTGCATATGGTATATAAAGAACCAGTTCAGCAGGGAGATTCTTTAAGTG
 40 GACTGTTTTCTTCTCTCAAAATTTCTTTCTTTATTTTTTAGTAATCAAGAAA
 GGCTGGAAAATCTGAAAACTGATCAAGCTGGACTTGTGCATTTATGTTTGT
 TTAAGACACTGCATTAAAGAAAGATTTGAAAAGTATACACAAAAATCAGATTTA
 GTAATAAAGGTTGTAAAAAATTGTAAACTGGTTGTACAATCATGATGTTAGTA
 ACAGTAATTTTTTTCTTAAATTAATTTACCCTTAAGAGTATGTTAGATTGATTAT
 45 CTGATAATGATTATTTAAATATTCCTATCTGCTTATAAAATGGCTGCTATAATAAT
 AATAATACAGATGTTGTTATATAAGGTATATCAGACCTACAGGCTTCTGGCAGGA
 TTTGTCAGATAATCAAGCCACACTAACTATGGAAAATGAGCAGCATTTTAAATGC
 TTTCTAGTGAAAAATTATAATCTACTTAACTCTAATCAGAAAAAAATTTCTCAA
 AAAAATATTATGAAAGTCAATAAAATAGATAATTTAACAAAAGTACAGGATTA

GAACATGCTTATACCTATAAATAAGAACAAAATTTCTAATGCTGCTCAAGTGGAA
AGGGTATTGCTAAAAGGATGTTTCCAAAAATCTTGTATATAAGATAGCAACAGTG
ATTGATGATAATACTGTACTTCATCTTACTTGCCACAAAATAACATTTTATAAATC
CTCAAAGTAAAATTGAGAAATCTTTAAGTTTTTTTCAAGTAACATAATCTATCTTT
5 GTATAATTCATATTTGGGAATATGGCTTTTAATAATGTTCTTCCCACAAAATAATCA
TGCTTTTTTCCTATGGTTACAGCATTAACTCTATTTTAAGTTGTTTTTGAACTTTA
TTGTTTTGTTATTTAAGTTTATGTTATTTATAAAAAAAAAAACCTTAATAAGCTGTA
TCTGTTTCATATGCTTTTAATTTTAAAGGAATAACAAAACCTGTCTGGCTCAACTGC
AAGTTTCCCTCCCTTTGTGACTGACACTAAGCTAGCACACAGCACTTGGGCCAG
10 CAAATCCTGGAAGGCAGACAAAAATAAGAGCCTGAAGCAATGCTTACAATAGAT
GTCTCACACAGAACAATACAAACATGTAAAAAATCTTTCACCACATATTCTTGCC
AATTAATTGGATCATATAAGTAAAATCATTACAAATATAAGTATTTACAGGATTT
TAAAGTTAGAATATATTTGAATGCATGGGTAGAAAATATCATATTTTAAACTAT
GTATATTTAAATTTAGTAATTTTCTAATCTCTAGAAATCTCTGCTGTTCAAAAGGT
15 GGCAGCACTGAAAGTTGTTTTCTGTTAGATGGCAAGAGCACAAATGCCCAAAT
AGAAGATGCAGTTAAGAATAAGGGGCCCTGAATGTCATGAAGGCTTGAGGTCAG
CCTACAGATAACAGGATTATTACAAGGATGAATTTCCACTTCAAAAGTCTTTCAT
TGGCAGATCTTGGTAGCACTTTATATGTTTACCAATGGGAGGTCAATATTTATCT
AATTTAAAAGGTATGCTAACCCTGTGGTTTTAATTTCAAAATATTTGTCATAAA
20 AGTCCCTTTACATAAATAGTATTTGGTAATACATTTATAGATGAGAGTTATATGA
AAAGGCTAGGTCAACAAAAACAATAGATTCATTTAATTTTCTGTGGTTGACCTA
TAGGACCAGGATGTAGAAAACCTAGAAAGAAGTCCCTTCTCAGATATACTCTTG
GGAGAGAGCACGAATGGTATTCTGAACATACCTGATTCAAGGACTTTGCTAGC
TAGGTTTTGAGGTCAGGCTTCAGTAACTGTAGTCTTGTGAGCATATTTGAGGGCAG
25 AGGAGGACTTAGTTTTTCATATGTGTTTCTTCTAGTGCCTAGCAGACTATCTGTTCA
TAATCAGTTTTTCAGTGTGAATTCCTGAATGTTTATAGACAAAAGAAAATACACA
CTAAACTAATCTTCATTTTAAAAGGGTAAAACATGACTATACAGAAATTTAAAT
AGAAATAGTGTATATACATATAAAATACAAGCTATGTTAGGACCAAATGCTCTTT
GTCTATGGAGTTATACTTCCATCAAATTACATAGCAATGCTGAATTAGGCAAAAC
30 CAACATTTAGTGGTAAATCCATTCCTGGTAGTATAAGTCACCTAAAAAAGACTTC
TAGAAATATGTACTTTAATTATTTGTTTTTCTCCTATTTTTTAAATTTATTATGCAAA
TTTTAGAAAATAAAATTTGCTCTAGTTACACACCTTTAGAATTCTAGAATATTAA
AACTGTAAGGGGCCCTCCATCCCTCTTACTCATTTGTAGTCTAGGAAATTGAGATT
TTGATACACCTAAGGTCACGCAGCTGGGTAGATATACAGCTGTCACAAGAGTCTA
35 GATCAGTTAGCACATGCTTTCTACTCTTCGATTATTAGTATTATTAGCTAATGGTC
TTTGGCATGTTTTTGTTTTTTATTTCTGTTGAGATATAGCCTTTACATTTGTACACA
AATGTGACTATGTCTTGGCAATGCACTTCATACACAATGACTAATCTATACTGTG
ATGATTTGACTCAAAGGAGAAAAGAAATTATGTAGTTTTCAATTCTGATTCCTA
TTCACCTTTTGTATGAATGGAAAGCTTTGTGCAAAATATACATATAAGCAGAG
40 TAAGCCTTTTAAAAATGTTCTTTGAAAGATAAAATTAATACATGAGTTTCTAAC
AATTAGAAAAGAAAAATTTAAACATGANATGATAACAAAAGTAAACAAAAGA
TACTTTCAAAGCAGTGAACAAAACATTTTGACATAAGCCATAATATAAATTATAA
TATAAAAAATAAAAACCATAGTATAAATTGTCAGCCTTTGAGTTGGCTACAAATT
CAATTTAATGACAGAAGAGAAGGGATGCTGGAGGTAAATTCTTAGGGTTTCTATC
45 TCATAGAGTTTGCTCTTCTGGTTCTCTAGACTGCCAAAGAACATAAAGATGTGTG
AGGGGACCTAGCTGTAGTAAAAGCAATCCTATAACAAGAAAACTCTAAACAG
TGCCCTTACGATTTTCTACTGAAATTTCTCTAATAGTAGAGGTGTAATAAGA
AGTTAGAGAATAATGCAAAGGGGGCCACCACAGACGGAACATTTCTTTTCTCTT
AAGACTCATGTGATTTTTGCATCTTACTCCATAATATATTTGTGGTTGCGTTAATA

TGACAATGTCTGCAATTAAACACCAGTAAGCAAAATTGATACATCAGAATGACTT
GCAGGGCTTATCATGCAGTTTGGTTTACATCCCTACTCCACTGCCATTTACTTGAG
CGTGAATGAGACACAAAAGATTATTTGCCTCCCATAATCCAACCTTTACACATAAA
TAACACAAGGCTAAAGAAAACCAGAACTCAAATTCACCACGCATAGGAGTGATA
5 ACAAAAATATTTAACAGTCAGTATGGGTGATTACTGGCCAATCAGAATACATCAC
TGATACATCGAAATGGATGCAGGCCACTATGACTAACTTGTGGGTATCATTCTA
TGATCACCTAAAACAGAGTTGGGAAAATATCTATTAAGTGGTCTCTCTGGTTTG
AATTCTCAATATGTATCTTAATATGAAATAGCTCATTAAAACTTCATGTGTAAC
ATTCAGCATTGTTGTCAGCTACTCTTTATTCCACTTCTGTACAGTATTTATTCAA
10 CCAAGCTGCTGCTTTCAATGAAGGTCAGTGTTCCTTCAGGGACACATATACTCC
CACCTATCCTTTAATTTTGAATGGTTTGTGAGGAAAATTTACTTTCTCTTGAGTTG
AAAACTTGACAGGAAGCAAGAAATAATACAGTCCTAGCCTCTTTCCAATAACA
TCTGATTTCTCCATTCTCAAACCTACACTTCTCAAGGAACCAGATATTTACTCTCAT
CTGGGAAGATGCCTCTTATGTTTTCTTTTACTTCTGTTATCATGTGGTTGCAT
15 TTTCCAAGTTCTTATCATTGAATTTATGAGAGCCTATCAAAATTTATTTTCTTTCA
TTTATATTCTAATAATTGAAATGTGAGATGAAAATAACATTTCACTTATGAAAAA
CCCTTCTCTTGATGAATCCTTCCATGTGTTAGTTATCTATTGCTGTGNAACAANTT
AANACTTAATGGCTTGAAAC

20 SEQ ID NO: 511

>14966 BLOOD 153659.5 X52015 g32576 Human mRNA for interleukin-1 receptor

antagonist.0
AGCTCCACCTGGGAGGGGACTGTGGCCAGGTAAGTGGCCGGGTGCTACTTATGG
GCAGCAGCTCAGTTGAGTTAGAGTCTGGAAAGACCTCAGAGAGACCTCCTGTCCTAT
25 GAGGCCCTCCCCATGGCTTTAGAGACGATCTGCCGACCCTCTGGGAGAAAATCCA
GCAAGATGCAAGCCTTCAGAATCTGGGATGTTAACCAGAAGACCTTCTATCTGAG
GAACAACCAACTAGTTGCTGGATACTTGCAAGGACCAAATGTCAATTTAGAAGA
AAAGATAGATGTGGTACCCATTGAGCCTCATGCTCTGTTCTTGGGAATCCATGGA
GGGAAGATGTGCCTGTCTGTCAAGTCTGGTGATGAGACCAGACTCCAGCTGG
30 AGGCAGTTAACATCACTGACCTGAGCGAGAACAGAAAGCAGGACAAGCGCTTCG
CCTTCATCCGCTCAGACAGCGGCCCCACCACAGTTTGTAGTCTGCCGCTGCCC
CGGTTGGTTCTCTGCACAGCGATGGAAGCTGACCAGCCCGTCAGCCTCACCAAT
ATGCCTGACGAAGGCGTCATGGTCACCAAATTCTACTTCCAGGAGGACGAGTAG
TACTGCCCAGGCCTGCCTGTTCCCATTTGTCATGGCAAGGACTGCAGGGACTGC
35 CAGTCCCCCTGCCCCAGGGCTCCCGGCTATGGGGGCACTGAGGACCAGCCATTG
AGGGGTGGACCCTCAGAAGGCGTCACAACAACCTGGTTCACAGGACTCTGCCTCC
TCTTCAACTGACCAGCCTCCATGCTGCCTCCAGAATGGTCTTTCTAATGTGTGAAT
CAGAGCACAGCAGCCCCTGCACAAAGCCCTTCCATGTCGCCTCTGCATTCAGGAT
CAAACCCCGACCACCTGCCCAACCTGCTCTCCTCTTGCCACTGCCTCTTCCCTCCCT
40 CATTCCACCTTCCCATGCCCTGGATCCATCAGGCCACTTGATGACCCCCAACCAA
GTGGCTCCACACCCTGTTTTACAAAAAGAAAAGACCAGTCCATGAGGGAGGT
TTTTAAGGGTTTGTGGAAAATGAAAATTAGGATTTTCATGATTTTTTTTTTCAGTCC
CCGTGAAGGAGAGCCCTTCATTTGGAGATTATGTTCTTTCGGGGAGAGGCTGAGG
ACTTAAAATATTCCTGCATTTGTGAAATGATGGTGAAAGTAAGTGGTAGCTTTTC
45 CCTTCTTTTTCTTCTTTTTTTGTGATGTCCCAACTTGTAATAAATAAGTTATGGT
ACTATGTTAGCCCCATAACTTTTAATTTTACAAGTTGTGGGACATCAC

SEQ ID NO: 512

>15111 BLOOD 350447.18 M14333 g181171 Human c-syn protooncogene mRNA,
complete cds. 0

CTAACATGCTTCTTCATCACAGGCACTCAGCAGCACAAAGACTCTCGTCCTGAAT
5 CATTTCCCTTCCCCTAAATGAAACCTTGCTTCTTACCTCGTGACTGTAAGAGGCGG
GGTTTCCGAGACGAATGTTTGAAGTGGGACTGGGTGGCCTCGTGATGAAGGTCA
AAGCTCGAGGACTCCTGAACTGGATCCAGAGGCACCATCCCCCTTGCGAGCATCT
CAGGTCCATGAACTTGACCTGGGACCTGTTGTCCTGATAAATCAAGCTCCAAGTC
TTCTAGAAGGGTACAGGCCTCCTCTCCACTATCGGGGCGGTATTCCTGCAGCCAG
10 ACCTGGAGCTCCTTGGGCAGGATGGAAAGAACTGCTCTAGCACCAGAAGCTCC
AGGATCTGTTCTTGGTGTTTATTTCTGGCCGCAGCCACTGATGACAAAGTTCCTT
CAGCCGACTGAGAGCCTCTCGGGGCCCAAAGTGTTCCTGGTAACAGAAGCGCCT
GAAGCGTTGGCGGAATATCTCTGGGTCTGGAGGAGGCGTGTCCTGTAGGGTGGA
ATCCTGCCCCACATGTGGTCTTCCTCATCTTCCTCTTCCACCTTCACTATTACGA
15 TACCATCCTTCTCCTGTGCAGCCTGTGGGGACAGACCCGTGGCTTCCCGTGATTC
AGCAGTCATCATTAGGCTCCAGGAAGTGAATGATCCAAACAGGGTCTGTGCTC
ACCTTTATGTCCTGGGAGGTTTTATGATGTGTTTCTTTACTATTCCGTGAGCCCCG
GGAGCGGCCTGGGGGCGCTGGGCGAGAAAGGGGAGCTGACTCTGGGGCTCAGG
CCGGCCGAAGGGCACC GGCGAGGAGGGGGCTGCCGCGGGCGAGGAGGAGGGGT
20 CGCCGCGAGCCGAAGGCCTTCGAGACCCGCCCGCCGCCGCGGCGAGAGTAGA
GGCGAGGTTGTTGTGCGAGCGGCGCGTCTCTCCCGCCCGGGCGCGCCGCGCTTC
TCCAGCGCACCGAGGACCGCCCCGGGGCGACACAAAGCCGCCGCCCGGGCGGGA
CCGCGCGGGCGGCCCGCCGCCCGCGCGCAAGGGAGGGATTTCGGCCGCCGGGGCGGGGA
CACCCCGGCGCCGCCCCCTCGGTGCTCTCGGAAGGCCACCGGCTCCCGGGGCCG
25 CCGGGGACCCCCCGAGCCGCTCGGCCGCGCCGGAGGAGGGCGGGGAGAGGA
CCATGTGAGTGGGCTCCGGAGCCTCAGCGCCGCGCAGTTTTTTTGAAGAAGCAGG
ATGCTGATCTAAACGTGGAAAAAGACCAGTCCTGCCTCTGTTGTAGAAGACATGT
GGTGTATATAAAGTTTGTGATCGTTGGCGGAAATTTTGGAATTTAGATAATGGGC
TGTGTGCAATGTAAGGATAAAGAAGCAACAAAAGTACGGAGGAGAGGGACGG
30 CAGCCTGAACCAGAGCTCTGGGTACCGCTATGGCACAGACCCACCCCTCAGCA
CTACCCAGCTTCGGTGTGACCTCCATCCCCAACTACAACAATTCACGCAGCC
GGGGGCCAAGGACTCACCGTCTTTGGAGGTGTGAACTCTTCGTCTCATACGGGGA
CCTTGCGTACGAGAGGAGGAACAGGAGTGACACTCTTTGTGGCCCTTTATGACTA
TGAAGCACGGACAGAAGATGACCTGAGTTTTACAAAGGAGAAAAATTTCAAAT
35 ATTGAACAGCTCGGAAGGAGATTGGTGGGAAGCCCGCTCCTTGACAACTGGAGA
GACAGGTTACATTCCCAGCAATTATGTGGCTCCAGTTGACTCTATCCAGGCAGAA
GAGTGGTACTTTGGAAAAGTGGCCGAAAAGATGCTGAGCGACAGCTATTGTCCT
TTGGAAACCAAGAGGTACCTTTCTTATCCGCGAGAGTGAAACCACCAAAGGTG
CCTATTCACTTTCTATCCGTGATTGGGATGATATGAAAGGAGACCATGTCAAACA
40 TTATAAAATTCGCAAACTTGACAATGGTGGATACTACATTACCACCCGGGCCAG
TTTGAAACACTTCAGCAGCTTGTACAACATTACTCAGAGAGAGCTGCAGGTCTCT
GCTGCCGCCTAGTAGTTCCCTGTCAAAAGGGATGCCAAGGCTTACCGATCTGTC
TGTCAAAACCAAAGATGTCTGGGAAATCCCTCGAGAATCCCTGCAGTTGATCAA
GAGACTGGGAAATGGGCAGTTTGGGGAAAGTATGGATGGGTACCTGGAATGGAAA
45 CACAAAAGTAGCCATAAAGACTCTTAAACCAGGCACAATGTCCCCCGAATCATT
CCTTGAGGAAGCGCAGATCATGAAGAAGCTGAAGCACGACAAGCTGGTCCAGCT
CTATGCAGTGGTGTCTGAGGAGCCCATCTACATCGTCACCGAGTATATGAACAAA
GGAAGTTTACTGGATTCTTAAAGATGGAGAAGGAAGAGCTCTGAAATTACCA
AATCTTGTGGACATGGCAGCACAGGTGGCTGCAGGAATGGCTTACATCGAGCGC

ATGAATTATATCCATAGAGATCTGCGATCAGCAAACATTCTAGTGGGGAATGGA
 CTCATATGCAAGATTGCTGACTTCGGATTGGCCCGATTGATAGAAGACAATGAGT
 ACACAGCAAGACAAGGTGCAAAGTTCCCCATCAAGTGGACGGCCCCCGAGGCAG
 CCCTGTACGGGAGGTTTACAATCAAGTCTGACGTGTGGTCTTTTGGGAATCTTACT
 5 CACAGAGCTGGTCACCAAAGGAAGAGTGCCATACCCAGGCATGAACAACCGGGA
 GGTGCTGGAGCAGGTGGAGCGAGGCTACAGGATGCCCTGCCCGCAGGACTGCCC
 CATCTCTCTGCATGAGCTCATGATCCACTGCTGGAAAAAGGACCCTGAAGAACGC
 CCCACTTTTGGTACTTGCAGAGCTTCCTGGAAGACTACTTTACCGCGACAGAGC
 CCCAGTACCAACCTGGTGAACCTGTAAGGCCCGGGTCTGCGGAGAGAGGCCT
 10 TGTCCCAGAGGCTGCCCCACCCCTCCCCATTAGCTTTCAATTCCGTAGCCAGCTG
 CTCCCCAGCAGCGGAACCGCCCAGGATCAGATTGCATGTGACTCTGAAGCTGAC
 GAACTTCCATGGCCCTCATTAAATGACACTTGTCCCCAAATCCGAACCTCCTCTGT
 GAAGCATTTCGAGACAGAACCTTGTTATTTCTCAGACTTTGGAAAATGCATTGTAT
 CGATGTTATGTAAAAGGCCAAACCTCTGTTCAAGTGTAATAGTTACTCCAGTGCC
 15 AACAATCCTAGTGCTTTCCTTTTTTAAAAATGCAAATCCTATGTGATTTTAACTCT
 GTCTTCACCTGATTCAACTAAAAAAGTATTATTTTCCAAAAGTGGCCTC
 TTTGTCTAAAACAATAAAATTTTTTTTCATGTTTTAACAAAAACCAATCAGGACA
 GGTGTTTTGTTTTGTTTTCTTTTTTATAAATATGAATATATATAATATATATGTCCC
 TGTACATATACAATGTGGGTGCTAATGTGGAGACTGTGGCCGGCCTGAGCCACCA
 20 AGCTGCGGGACCCAGAGGGAGGATTTTACTGCAAGTCAGCATCAAAGCACCGGT
 GTTATTCTGAAAACACCAGTGGCCTCATTTTTGGCTTTTGCAAAGCATGAATTTT
 TCATTTGGATTGCACTTTCCTGGTTCATGACTGTACCTGTAGGTGTTTGTACTTT
 GACTCTTTTTCAGGAACCAACCCCGCAAGCTGAATTTACAAGTTCTGTTAGCACTAT
 TTGCTTCAACTTACTGCGATTTGTTCTCAAAACTTAAAAATAAGCAAGCAAATGG
 25 CTGATACTACCAAGAGAACTGGAAGATGGATACCACACAACTTCTTGTATAAA
 AATATGAATGCTGAAATGTTTCAGACATTTTAAATTAATAAACCTGTAACCACA
 TTTAAGTGATCTAAAACCCATAGCATTGTAGTCATGGCAACCCGCTAACTTTCT
 CATGCAACTAAAATTTCTGGGGGAAATGAGGGTGGGGGTGTACATTTCCCATTG
 TAAAATAAGTGTTTTAAATGTCCTGTACTGCTAACGAATGACTTTCTATATGTCCA
 30 GGAGTTCTCCAGTGAATAACTATGCACTACTTTACATTTTATGGGGATGCACAA
 AAACAAAAAAGTATTACATTTTGTAGTTGCTGTTTGTACCAACCTTAAATTACATA
 TGTTTAACAACAACAAATCAAAAATCCTATTTCTATTGAGTTTTTAATACTGACTA
 GCAACTCTGAAGTCTTAATTCCTTTTTTGTATGATTTATTTGTGAGTTTACATTTT
 TAAATTGTTTAACTTTCTTAATTTAGTAATTAAGAGAGCATTTTACATTTGAN
 35 AAAAAANAAAAANGGGCGGCCCGCCGACTAGTGA

SEQ ID NO: 513

>15354 BLOOD 337518.7 Z32765 g525231 Human CD36 gene exon 15. 0

AGAAGGGAGACCTGTGTACATTTGCTGATGTCTAGCACNCCATATGGTGTGCTAG
 40 ACATCAGCAAATGCAAAGAAGGGAGACCTGTGTACATTTCACTTCCTCATTTTCT
 GTATGCAAGTCCTGATGTTTCAGAACCTATTGATGGATTAAACCCAAATGAAGAA
 GAACATAGGACATACTTGGATATTGAACCTATAACTGGATTCACTTTACAATTTG
 CAAAACGGCTGCAGGTCAACCTATTGGTCAAGCCATCAGAAAAAATTCAAGTAT
 TAAAGAATCTGAAGAGGAACTATATTGTGCCTATTCTTTGGCTTAATGAGACTGG
 45 GACCATTGGTGATGAGAAGGCAAACATGTTTCAAGTCAAGTAACTGGAAAAAT
 AAACCTCCTTGGCCTGATAGAAATGATCTTACTCAGTGTTGGTGTGGTGATGTTT
 GTTGCTTTTATGATTTTCAATTTGTGCATGCAGATCGAAAAACAATAAAATAAACCT
 GGCTCAAGCACAAACCAATTTGTGTTGTTCTGATTCAATAATTGGTTTCTGGGTG
 GCCAATTCAGAAGAAGAGTGTACATGCTCAACAAATCCTAGGCCCTGCATTCCTG

TCATCCTCATCCGGGGGAAACACCATCATCCCAGTAGCTGCCCTATTCAACTGCA
ACAGTCTCCAGGACCATCAGTATACTGCATTTTCATGTGCACCAAATATTTTGAAA
GACATTTATAAATAATTGGCTTATGACTCATATTTCTCTATGAATACCTTCATACA
GCAGGTATAACTCTTTTCTTTATGGGCTTAAATATTTTGTCAGTATCCTGCAAAT
5 GGACATCATTTTAGCACACTAGCGGTTTATATTTTAAGGACCTTCATTCTCTGTTT
TGCACCTCTTCTGGAAATTGAGTAAATTTTGCTTTTTTTTTTTTACTCAGTTGCAAC
TTACGCTTGGCATCTTCAGAATGCTTTTCTAGCATTAAAGAGATGTAAATGATAAA
GGAATTATTGTATGAAATATTACAAAGCGTAGACTATGCATTGTTATTATTATA
ATATTTTTTGCTGTCATAATCGCCTCATAAAGACAGGTTTCAACCATTAATAATAT
10 GTTCTTCCTTAAATTCCTGTGCTTTTTCTAGTTCCTCTTGTGTCATAAAATGTTTAT
CCTAATTTTCTCTCTGAAGTATATTTTATCTGAATCCACATTTCTTTATAAATCCAT
AGTCCTTGCTGAAATATGCTTTCTAAATTTCTACCACTTTGTTCTAGGCTAATTTT
TTAAGCTAATTGGATGAAGAACAAAAAGACATTTGGTTTCATCCTTTACAGCAGT
AGGACAATTGCAAAGGTTTTTCTTTTTCATAAGGAGACACATTAATAGGTAACCT
15 CTGTTTCTTGAGCAGGGGTTCACTTATTCTGAGAGCATTAGTTCTCCTAAAAAGCT
CCAGCATAGAAAGGGAAGATAAACCATAATTCTAGCTTGTGTTTTACCCACAGAA
GGATACAGGACAAAGGAATAGTAACTGGCCTGTTTGGATACTAAAATTGAAAAT
AACTTTTAGCCTCCTCCTTATGATAGCCGCCAGAGTAAATGTTGAGCATTACTAC
AGAAAAGCCACAAACCAAGAATCTACCTGTTTGGAAAGATCTTTTGCATCTCTGA
20 AGGTGCTTAAAGCATACTTTAGTGCCTTTCCTTTTAACTGGGAAGATAAAAGAAG
TATCTGTCCAAGATATTAATATGTAAGATAACATTGTAGACATGTTCTTCTGATA
ATACAAAGGTTTATTCTATTTGCATTAGGATATTTGTGGACATGTCCATCTAATATA
AAGGAAAGTTTTTTAATCATTGAGGCATGTAGGGCTGAGTTATATAATGTAGAAA
CTTCTAAAGATAATTGGATGAGAATATACATATTGACCTGTATATTATGACTAAT
25 CATGACTCAGATCTTAATACAGGGATGATCTCATAGCATTTAGATATCAGAAAAG
GTTTTGACCTATATGTCTTTAATATTTTTTTGAATACATGTATAATCTTTATCATTCC
TCAGTGTTTCATTTCTCAAATTCGTGAAAAGGAATATAAGAGGAAAGACAATTCA
TATACAAAGACAACGAGATTAAAAATATGCAGTAGGAAAAATAATTACTTAAGG
GGAGATTTTTTTTACATGAAATCTGGGCTTTGGATGTGTGTGTGTGTGGTGTGTGT
30 GTGTGCACATATGCACTGTGGTGGGAGTGGGGCAACTTGGGGAATATGTTACAT
GTGTGACTTTGTTTTGCCCTGGCGAAGTTAATGTTGTTTCAGAAAGGGTAAATGTT
TGGACACTTGCAATTGCTCATGGATGAATTTATATGTTTTAGTCATAGAAAAATT
GTACCCTTTGATAGAAGCACATTTTCTTTCCAAAGTTGGTTATTAACCACAGAATT
ATAGCAGGTATTCATAACTTAAGTTTGAAAATCAATAGCGTCTGCAAATGGATTA
35 ACAGATTAGAGAATCAACAGCATCGGAAAAATAGGTAAATGCATATTGCTTCTAA
CAAGTGCATGAAGAAATAGAAGAAGCTATGTAGCTTTCAGTTCTGACAGAAAAG
GGTGAAGGAGGGTATCATTTCAAGAAAAAAAATAGCTATCACGCAATGGTTATC
TCTGAAAATATTTGTATTAAGATGTGTATACATGGCCAGGCATGGTGGCTCATGC
C

40

SEQ ID NO: 514

>15389 BLOOD gi|1186305|gb|N45139.1|N45139 yz13g11.s1

Soares_multiple_sclerosis_2NbHMSP Homo sapiens cDNA clone IMAGE:282980 3',

mRNA sequence

45

CTGTTCAAAACAGTTTATTTTATTTTATTTTTTTTTTTTGTTCAGACAAACACATTGAT
TTCTGGACCACAGTAGAGGATGGAAACCTTTCACAACTTATTTATTTGAAAATA
CAAATATAAAATTATACTTTCCACATCTGTGATGTGAGAGACTGCCATCCACATA
GTAATTTTTTACAACAGGGCTTTAAGAAAGCCACACACAAAGACCTGAAAGATG
CTTAGATATATATATAGATAGATACATATATATGTATATATAT

SEQ ID NO: 515

>15418 BLOOD GB_N46975 gi|1188141|gb|N46975|N46975 yv28f12.r1 Soares fetal liver
spleen 1NFLS Homo sapiens cDNA clone IMAGE:244079 5', mRNA sequence [Homo
sapiens]

TTGGTCAACCACGCCAAGGGANNTNTCAGACTCCTTTCACAAGCCAGCTTCTGAC
CCAGGCAGCTGACCCTCACCATGGACACTACAGGCCCTGGAATGGCCAGGGTGG
ACCAAAAGCCATGCCAGCTGGGCATGACCCAGGCAGCCAGCCACAGGTGANAG
GGGGCTTGTTGGCTGAGTGATCTGCAGAGGAGANAGCAGCCCCAGC

SEQ ID NO: 516

>15620 BLOOD 238262.4 Incyte Unique

TGTGCTCCCATCTTTACCCAGCCACTGTGTCCAGTCCATGGTGCCCCCATCTTTGC
CCAGCCACCACCTCTTGTCTGACTCCCCGTCCTCCCCTTGGTGCTGGGGCTCCTGCC
TGTCCCTCCTCTGTCAAGTGCACCTGGACCTGGGAGTGACCTTGGAGTGACCTTG
ACCCTGGCAGCTCCAACCTCTCAACCCGTCAGCCAGGCTCCTTGAAACCTGGCTGG
AGGGAAACGGCAAACCCTGCCACCTGGAGTCGCCTAAAATTTCGCAGCCACGGTC
CTCCAACAGGCCCCACGCTTCCCGCCAGTCCAGCACATTTCTTGGTTAATTTATA
ATTCTGTTTTTCCCAGGCAGCTATTTTGCAATTTCCAGGCTCAACAAAGCCTCCAAC
AGTTCTTCACCTTCCTAATTCCGAGCTGTTGCCACATTTGTTTATTTTATCAAAA
GAACTTCCGGGCCGGGTGCAGTGGCTCANNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNCC
AATCGGAAGTGAATTTAACTAGATGTAGTAACCTTTTTTTTCTTTACTTCTAAAAA
AGTTACAGTTTACTAATAAAGTTAAGTCTGGTTCTGTCCTAGAGGAAATAAATTCT
ACTATTAATTCATGTCTTAAGTTACTTGGGTAAACACTTTCAGCCACCCAGATT
AATTAAAGTGGAGCAGTGGAGCCCCTGGCTGGGAGATGGCCTCCAGAGGAGCAG
CTGCAGGGCATGTTCTGGGCTTAGCGACAGAGGCAAGCAAGGGACTGGTGTCTC
TGGTGAGAGGTGGGTTTGATGTATCTCTGTCCTATGCTGGTCTCTCTCTCTCTTA
TAAAATCCTCTGTGGTCAACTGACTACTGCGTATCGCAGTGAATAAGACTGCAC
AGTTGCTGGTAGGTGAGTTTAAAGTCTTAATCTATGCATTCAGAGAAATATTTTT
ATATGCTTTGTGTAATTTATAACAAGGATTTTTTTTTTTAGCTTTGTAACTGTGAA
TTCACCCCTCCTCCTCCACTGCATATTTAAAGCATGTGTTACACTGTGTGTAAAC
ATTCAGTGAAGATTTTTTCTTTGTGCATTGCTGACTGTTCAAACATAACAAGTATT
ATTAAAATTAATATTAAGTCAAAAAAACAAGAAAGAAAAAATTT
GGAA

SEQ ID NO: 517

>15743 BLOOD Hs.75277 gnl|UG|Hs#S1569956 Homo sapiens mRNA; cDNA
DKFZp586M141 (from clone DKFZp586M141) /cds=UNKNOWN /gb=AL050139
/gi=4884349 /ug=Hs.75277 /len=3312

TATTATTCTGATGGATACAGATAATGATCTTTTCTCTTGTGAGGTATCTTCATTTA
TGCAGTGTCCAAAAATAGCCATGTGTAAGAGTCTTTCTGTATGACGAACTACATG
GAAAAGACTTCTGTGGACATAATTCTGACCGAAACCCATGAAGTTACTTCAGTAT
AAGAAGAACGTTACACGGAAATCACCAAATATTTTGCAACTTTATTTCTTCTGAC
ATGGAGTGAACATCAATAGGAATACTTTCAAAGAAAATGAAAACACAGAAGCAA
AGAGAAATGTGGCACTTCACATTTTAACTACAGATGGACTTGGTTTGAGGGAG
GGGGAATCACAGATTTGGTGCTAAGTTAATTAGAACTGGCAGCGTTTTACAGTA
GTACACCAGCCTGGATGTTTTTCTAAAATGTTTACCTGGGAGAGCTGGGGTTTG
TTTGTGAGGAGAAAGAGTACTGTGGAAAACCTCTGCTTGAGTACCATGTGGCCA

GGCCTATGTGGATGGCTACTCCGTGCTGTGCGGCTTCACCAGCGGTTGGGATTGG
CCCAGCTTGGAGTGCTTGTGTGGTCCAACCTCAGTCTGGCCCCATAGTGACTTTT
GCCCCATGATTCTGCTTCACTGTTGGAATCCTCTTTGAAGTTCCCCCTCTCTTTGC
TAAAGCAGTGAAGGAAGAGAACAGAGACAAACTCTTTGGACTGTGAAAGAGAA
5 GGTAGAGAATTCCAGGCAACAGTCTGACCAAGGGTGTAACCAGTTTATTATAT
ATATATTTTTTCTTTGAATTAAAACCTAGAGTGTTGTATTTTTTCTTTTTTTTTT
TTTTTTTTTTTTTACCCTTTTTCTCCTTAGGCCAAGTTTAGCTTATTCTTATCTTTCC
ACCCAAACACCTACACAACGTTTAGGCTTCCTGTAAGGTTTGAATGAGACAGATG
TACTCTGAAGGCTGGTGGTAAATGTGTTTGATGACCAGACTCTTCATACAGTCGG
10 CTTGGGCCACTTTAAAGGACAAAAGCCAGAGCTCAGCTTTATCCCTCTCCAGTG
CTGGGAGCCAAAAAACTGTTGACAGTTTTTTGTGCAGCTCAAGAAAACCTTTGAAA
AGAACATGCTTTAACTGAAGCATTGGACTCTGCAGCTTTCTGTGTAAGGCCCGTG
TACTCCCACTGGGCAGGGTGAGGACCAAAAATCTGAAACTCTTATGAATCTGAC
ATATTATATGGAAATTATATCTTGTGACCGTCTTCAAGTGCATGGACTTAAAATT
15 CATGAGAGACTAAATGTGAGGGAGAGGTGGATTTAAAGAGGCCAGACCTTAACC
AAAGATGCTGAGATACAGCATTCTGTCCCCCTGCCCTAGAAACTCCATAAATGC
TGTCACAACCCTATCATTGCTGATGCTTTCTGCATGTCAGCAGTCCAGGAGGATG
CTTTTTGTCTCTCTTTGCCTCCACTTTACAAAAGATAATATGATAGAGGCAACGTT
TATAACAGTCACATTTAATTATAATGTACATCAAAGGCAGAATTTTCAGAAATGGTT
20 TCTTAAATTTCTTGGGAACGGTTTCCACATATCAGTTATAGACAAAGGCCATGG
GACTATGCTAAACCAATAAAACCTTATTAGCAAATCTTTAGATTCTGACTTAGCC
AGAGCATCTGAGTGTTCAAGTACAGTTTTACAGTGGGTAAGGTTGTCTCTTGATG
TTTTTCTCCGTTGTGTGATGACAGATGCTATTTCTGTTTTATTTGGTGATTATACGA
GACTTCTAATACATAAATGAACGGGTATTGGTGCCTCTTTATTTTAAAAAATTTG
25 AAGAAAAGAGCCACCTCATATTCATAGGGTGTGTATTTTTTGAGTGTGAGCATTT
AATTGAAAATAAGAAAGCTATGAAGTAAATGTAACTTCTCTGTAGCAGCTAATG
CATAGAGACACTAAAACCCACACCACATTTTGTGGGAAATGAGGATCCTGATCCT
CTTTTGTCTCTCCAGGTAGTCTCGCAGGTTATGCAGCTTAAGTTCAGTCTTCTTT
ATGCTGCGATTGATTTCCACCTCAGTGGCTTAGCCTTTGGGACAGTGGATACTGC
30 AACAGCCAAGAACTCTTGTTATCCGCACAAGCTGCTGGTAGACTACATTAGCCC
TCTGGTTTTTCCAGCTCAACCTCTGATAAAGTGGACTGAGAGCCACGCTGCTCAGT
CTGTTTCGTCAGCCGACTCAGGTTATTTTCAGGGAAGGCATGGAGGCATAGTTTG
GTTAGTTTCATCACTAGGATGTATAAGGTGACGACACAAACCAAATACCTTTCTT
TCATCACTTAACTATACGTACTTTATCTCTGGTAACACTAGAATGCTGTGGTCTTG
35 AGGGAATGTTAGCAAGGAACACATAGAAGATTTGGTGTTTCATAAGCCTGTCTA
GGTGTGGCAGGTTTTGTGTGGTACACTGATGTTTACCATAAGCAGGTACAAGCTT
CATGAACCGTTCTTAATGAACATAATTGAATAGATACCAAAAATAGAATGACA
AATGTATTTTAATAGCAGATGAGGCAGTTTTAGGATGAATTTTCCACTGTTGATTT
TACTTCAAGACATAGCAAGAGAAACAAAATTTTGTTTTCAAGACATTTCCACTGC
40 AGTTTCAAGCTGTAGTGGGCATATGCTTCATTTACTTCCAAAGAGGCAAAAGCAG
CTGGAATTGGCTTACAGCACATGCTTTGTTTCATGTTATGGGTGAGGACCTACAT
ACACTCTTACTTTAGCAGTCACTTAACCTTCTCCAGCAAGGCAGTTGTGGGGTTC
ACTAGGATTTAGTGCCTGATCTTTTTTTTTGGGAAGGGGCGGGAATGAATGTGTTG
GGGCTGGGAGGGAAGCAGAAGAAAATGGGAGTGTGAGTGAGTGTGCATGTGTCT
45 GAAGTTCACCATTTGCCCCCACCTGCACCTAGCAAGGAACAGGTGTTTGATGTATT
TTGCTCATGACTGCAGTATGCATGTATTTTTTCTTCTCTGTGTTTTCTAAACTTA
CACTAAAGGATTCATCAAATCATCTTGTTTCAGATGGCTCAGGATTGTATTTATTT
GCTTACCCCGTGCTCTTGGGTTCTATAGTATTTCTATAATTATGTAACGAGAATAG
TGTTGCACTGTAATCTATCATATAGAGCTATATGTATGGAAAATTTTGATCAATTT

TTTAAGAAATGTATCCTGTTTGCAAAGGCACAGTAAAGTTGCATCTTATAGACTA
TAGGCAATAAAGCTAACAATAAACCTTATTTAACACAAACCAAAAAAAAAAAAAA
AAAAGG

5 SEQ ID NO: 518

>15833 BLOOD GB_N63635 gi|1211464|gb|N63635|N63635 za16c12.s1 Soares fetal liver
spleen 1NFLS Homo sapiens cDNA clone IMAGE:292726 3' similar to gb:M54915 PIM-1
PROTO-ONCOGENE SERINE/THREONINE-PROTEIN KINASE (HUMAN);, mRNA
sequence [Homo sapiens]

10 TTTTTTCCAGGTTAGAATGCGCATCTTTCAAAAAAAAAAAAAAAAAACAGGTAAA
ATAACTTAAAGGCAAAATTTCTTAAAAATTAGATCCACTACAATCTTTTTGTATA
CTACCATGCCAACTGTACACACATTTACAGCTTTTCTGTTGATTGCATTGTTTGTG
CATTTTTTGTGTGTGTGAGGTCTTGGCTTTGAAACAGTTAAGTAAAAACCAAAAA
GGAAGACCAGTTCNCNCGGAGTTTTACNAAAGGAGGCAGAAAAAAGGGCAGGT
15 GGCCAGCGTTTGGCCAGTAGCCNCTTCCATGGCNCCTTTC

SEQ ID NO: 519

>15915 BLOOD 233764.7 Y12711 g6759555 Human mRNA for putative progesterone
binding protein. 0

20 GCCTAGCGCGGCCCAACCTTTACTCCAGAGATCATGGCTGCCGAGGATGTGGTGG
CGACTGGCGCCGACCCAAGCGATCTGGAGAGCGGCGGGCTGCTGCATGAGATTT
TCACGTGCGCGCTCAACCTGCTGCTGCTGCGCTCTGCATCTTCCTGCTCTACAAG
ATCGTGCGCGAATTCACCCCCCGCGAGCTGCGGCGCTTCGACGGCGTCCAGGACC
ACGCGCATACTCATGGGCATCAACGGCAAGGTGTTTCGATGTGACCAAAGGCCGCA
25 AATTCTACGGGCCCCGAGGGGCGGTATGGGGTCTTTGCTGGAAGAGATGCATCCA
GGGGCCTTGCCACATTTTGCCTGGATAAGGAAGCACTGAAGGATGAGTACGATG
ACCTTTCTGACCTCACTGCTGCCAGCAGGAGACTCTGAGTGAAGTGGGAGTCTCA
GTTCACTTTCAAGTATCATCACGTGGGCAAACTGCTGAAGGAGGGGGAGGAGCC
CACTGTGTACTCAGATGAGGAAGAACCAAAAGATGAGAGTGCCCGGAAAAATGA
30 TTAAAGCATTCAAGTGAAGTATATCTATTTTTGTATTTTGCAAACCATTTGTAAC
AGTCCACTCTGTCTTTAAACATAGTGATTACAATATTTAGAAAGTTTTGAGCAC
TTGCTATAAGTTTTTTAATTAACATCACTAGTGACACTAATAAAATTAACCTCTTA
GAATGCATGATGTGTTTGTGTGTCACAAATCCAGAAAGTGAAGTGCAGTGCTGTA
ATACACATGTTAATACTGTTTTTCTTCTATCTGTAGT
35

SEQ ID NO: 520

>15974 BLOOD 981864.1 Incyte Unique

AACTAATATTAATAGTAAATTTAATGTGTATTAATATTGTCATATAATATTGTA
ATTACTCATGTAAATGTAAATATTACATTGAGGATATAGTAAATATTAATTTAC
40 TATGTCATTGAGGACAGTATTTCAAACCTAGCTTTTTTAAAAAGAAAAACAGAAGA
TGGCAGTGAATAGAACAGTGATTGTTCACTACTTGGATCTACTGCCTTAATTT
ATACTAGGATGTCAATCCACCATTGATTTTGTACCATCAGTGCAAATGTCAACGT
AGCAAAAAAGGCAAATAATGTCTGAGTACTATTACTAAAATAATTTTGAAGTTTGT
CAAGCCCTGAAAGGGTCTCCAGGACCCTCATGGGGTTTGTGGATCAACTTAAAG
45 AACCATTGATAAAATCAAATGAGCAAACCTGGGCTTATGTTTCTTGAAAATATTCT
GGG

SEQ ID NO: 521

>16020 BLOOD Hs.30211 gnl|UG|Hs#S2005168 EST382554 Homo sapiens cDNA

/gb=AW970473 /gi=8160318 /ug=Hs.30211 /len=707

5 ATTTGGCCCTCGAGGCCAAGAATTCGGCACGAGGTTTTCTTTAGGCTTCTCATG
CATATGAATATTTTAAGCACGAATGGACTACTAAATATCTGAGTTTTTTTTTTTTT
AAAGATCCTAACAGAACATAGCGTAACAATATTGGTCTTCCAGGTGTTACTCATT
TCAATTATGTGTAGTATAACCAGGACAGACCTATTTTCATGTCTTATTTCTTTAAAG
AGCTGCTTCATTGGCCGGGCGCCATGGCTCACGTCTGTAATCCCAGCACTTTGGG
AGGCCGAGGCGGGTGGGTACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCAA
10 CATGGCGAAACCCCATCTTAATAAAAAATACAAAAAATTAGCCGGGTGTGGTG
TCACGCGCCTGTAATCCCAGCTACTTGGGGGGCTCAGGCAGGAGAATTGCCTGA
ACCCAGGAGGCGGAGGTTGCAGTGAGCTGAGATTGGGCCACTGCACTCCACCCT
GGGCGACAGAGTGAGACTCGGTCTCAGAAAAAAAAAAAAAAAAAGAGCTGCTTCAC
ATATAAATGTCTATAGCTAGTAGCCTGGCCCTTAATGTTTAATTTGAATAGATAT
15 ATCTGTTTTCCGTGAATTATCTTGAAAGTTTTAAACAAAATGACCTCATAGTTTTT
AAATAAAAATATTATTACCTAAAATGTGCTAGTAGCATCTTTGCCCAA

SEQ ID NO: 522

>16166 BLOOD 346280.34 AB020692 g4240258 Human mRNA for KIAA0885 protein,

20 complete cds. 0

TTTTTTTTTAGTTTCTCAAAAATCAGTAAACTTTATGGGGTTCCATTCTTTCGCC
ATTAAACAGAAACTGGAGAAAGCAAAAATGTTTCGGTGTTTACAAAGATAAACT
GGCCTCTTACCCAGAGATCAAAACCTGAAACTGACAAGGGGGAAGATAAAACC
GCCCTCCCCACATCCCCTGAGCTGACCCTTGTCATCTTAGGACAAAGCCTTCGA
25 GTCCACTGGCCAGGGGACCCTGTATATGGCCAATTCAAGAAGAGGGCCAAGAAA
TCAGACCCATCCATTCCCGTGATATAAAGTTGAACAGAAGCTACACCAAGGGTC
AAGTGTCTCGTATTTTACAGGACACAGTAACCAGGCGGCTACTTATAAAAAAAA
ACAAGATTCATTTACAGGCACAACCTTTTTTATTTTTTTTTTGTGTTTTTAAATCA
GTAAAAGAAACCGGGTCCTAGAAGCTGCAGTGATCTAAGCAGCAGCAAGTTTGT
30 GCATTCATTTTTTTTTGTGTTTTGTTTAAATATGTTTAAATTATCACACTGCTGGCACT
CCTCATTTGCATGAAATTCTGCACCATACTTACTAATTCGTAGTAAAGTTACCCCC
CAACCCACGAAAAAAAAAACCTACTCTGGAAGAAAATTTTCACTGAAATATAACC
AACTTCTTTAAGTGGGATTGTGACAAGATTATAAATGATATGAAAAATAACATT
TTTAAATTTGGCCATCCAACCTTANAGAAATGGTTTGGCCTATACAAATTTTGT
35 AATTTTTAAAGATAATATATTCTACCCTCATATGGTCCTCAGAATTAAGCATAA
TGAACAGGAAGAAAAGGAAAAGAATGCAACTGAGTGCTAAGGCAGAACATCTT
GCCAGAAGTAATTAATGAAGGTAGAGTATATAATGAAAAGTGCAGAATTTCTATA
GGGCCAACAAAGATAACAGTCTATATTTTCACTTACACAGGCAAAGTGGATTCTG
CAATTACCAGTTGCGTTAAATGCACCAAATAAAGCTCCTAAAATTGATACTATAA
40 GGCGCCACCTTAAGTTTTTCCAGGCTGCAACTGTGCATTATTTAAAATGGTTTTCT
TAAATTTATTTATTTTTTTAAACATAACACGAGGAAGGTGTTAAAACCTGGTGTA
TAGCTCAATAGAATAAGTATTCCAGATTTCTGGGAGGGATGAAGAGGGAGATATT
CAGAACCCTTCACCAGATTCCCCCAACTTGATCATAGTGGATTAATGGTGTGCT
TTGTGGATGTGGTTAGTCAATGACACCAGCTTGACGGATCTTTCTTTCTGCACCA
45 AACCCCATTTAGATTATCTGGTCCCCTTGGCTGACGAAGAACCATTAGGCGAGGAG
CACTGGCATCATCCAGAGTGATATTCTTCAAGCGATTGACCAACCGATCAGGTCTG
AGGAGCTGCAACAGCCTTGGGGCCCTCACAGACTCGCCAAACATTACAGGCGCT
GCACTTGCCAGTGCGCTGATTAAGAATCACTGAGAACTCCACCTCATCTCCTGCC
TGTAGCTCAATGCCATCCTGAACTTCTTTCACATGGAAAAGAGCTTCTTGCTAT

CTCCTACTTCATAGTTAATGAAGCCAACTGATCTTTCACACATTCCACTGTGGCC
CTGCGCAGGGGTGTGATGTTGTAAGCCATAGTTTGTGCATTTTGGCCCAGGACAC
ACAATTGGAACCTTGACGCTCTCCCCTTCTGCAGGCAATCCCCTTGTGGCCATC
CCAACGATGCCAAATGGATAGACCTCACCTTTCATATCGCCCTCCTCCACAATCT
5 CAATCATTCCTTGGTACTCAGTCTGTGTTGGATCAACACTCCTCAGGGGGCGAAT
TACTTTGCCAGAGTAAATGGTGGGATCAGCTTCCTCAGTAATGCCATTCACTGAG
TGTGTTTTGTTCACTTTTTCTGCACTGACTTTGTTGCCTTTGCCTTTGGACAAGCTA
TACTCGACCATGTCCCCCAGTTCCAGGCTATCAACATCACCAGAGAACTCACTGT
AATGGAAAAAGATTTCCCTTATCATGATTGGCTGTTTCAATAAATCCAAAATTATC
10 CTTCAGAGTTGCCACATAACCCAAGAGCCTCTTGAGTTAGAATTACGACCTAAA
AGTCGCACACAAGTTGCAACCTGCTGTCCAGGCCTCTGTTTGTCACTAATACTAA
ATTCAACCTTATCTCCTATTTGAGGAGAAGTAGATCCTTCCACATCCTTGGCTTGA
AAAGCAATAGTCAGTTTCACCCACAGTCATCATAAGCAATAATGCCATCCTCAG
CCTCCTTCTCTTTGCCTTTATTTGGGCTAGTGGTTTTAGGATTGGAAAAAGTGGCT
15 TCTTTTTCTACCGTGCCCGAGAAAACGGTGATCTGAATGGGAATGAAATGAAACCG
TGCCCTTGGGAAGTTTTTTAATCCTAATAGCATGATTCTTTGAGCAGAGAGCAT
ATCAGGAACACAGTAACTCTACTTCATCTGCAATATGGAGCTGGTTCCCATCC
AGAATTTCACTGAAGTGGAAGAACATACGAACATCACGATCCACACACTTGATG
AAACCAAAACCATCTCTCATGGCAGCAATCACACCCATTTCTCGGGCTTCATTAG
20 TGAAGTGAATGTATTTGACAGAACTTCTATATTGGTTGCTCGCTCTAATTTGTCA
CGTCGGTCTGTTGAAATATTAAACCTAACATGGTCACCTTCCAGCAGGGTCACCT
TGGGATTTCCGTATCTTTGTCTCCAAAGGGGAAGTTCTTTAGGGATCAGAAAGTCAA
CTTTGAGGCTCCTGGCAATGGGTGATTCTGGTTTACTGGGTACTTTGGGATA
TAAAGTCTTTGGTTACAGTTCCTTCAAATGTTCAATGCTGATATCTTCAAAAANGGACT
25 GTTCCTTGAGGCAAATAGNCTGACATCTGTTGCAACTTNTTACCATNTCTGTCC
GTGATTGTNGAATTCCACATCATCGCCAGGCTGTAAGGTTTCTAAGTCACCCTTA
AATTCATATAGTGAAAGAATATCTCTTTTACAACATCACCTCTTCAATAAAGC
CAATGCCTCCTTCATGGCACAACTACTCCCTGACAGCGGGCTTGTTTCTTTTTCA
ACAGTATAATGTTGCGAGCACTTACAGCACCAGTATGTTTATTGTTATCAATTAC
30 AAAGTTTATTTTATCTCCAGTTTCCAGCTGAACGTTCCCTTCGACATCTTCAGGGG
TGTAAGTCAGATAAAACAAGAAATCCTCCCTGAAGAACGAATGAATGGACAAGA
AGTGTTTTATCTGACTTACACCCCTGAAGATGTCGAAGGGAACGTTTCAGCTGGAA
ACTGGAGATAAAATAAACTTTGTAATTGATAACAATAAACATACTGGTGCTGTAA
GTGCTCGCAACATTATGCTGTTGAAAAAGAAACAAGCCCGCTGTCAGGGAGTAG
35 TTTGTGCCATGAAGGAGGCATTTGGCTTTATTGAAAGAGGTGATGTTGTAAAAGA
GATATTCTTTCATATAGTGAATTTAAGGGTGACTTAGAAACCTTACAGCCTGGC
GATGATGTGGAATTCACAATCAAGGACAGAAATGGTAAAGAAGTTGCAACAGAT
GTCAGACTATTGCCTCAAGGAACAGTCATTTTTGAAGATATCAGCATTGAACATT
TTGAAGGAACTGTAACCAAAGTTATCCCAAAGTACCCAGTAAAAACCAGAATG
40 ACCATTGCCAGGACGCATCAAAGTTGACTTTGTGATCCCTAAAGAACTTCCCTT
TGGAGACAAAGATACGAAATCCAAGGTGACCCTGCTGGAAGGTGACCATGTTAG
GTTTAATATTTCAACAGACCGACGTGACAAATTAGAGCGAGCAACCAATATAGA
AGTTCTGTCAAATACATTTCAAGTTCATAATGAAGCCCGAGAAATGGGTGTGATT
GCTGCCATGAGAGATGGTTTTGGTTTCATCAAGTGTGTGGATCGTGATGTTCTGTA
45 TGTCTTCCACTTCAGTGAAATTTCTGGATGGGAACCAGCTCCATATTGCAGATGA
AGTAGAGTTTACTGTGGTTCCTGATATGCTCTCTGCTCAAAGAAATCATGCTATT
AGGATTAAAAAACTTCCAAGGGCACGGTTTCATTTCAATCCCATTTCAGATCACC
GTTTTCTGGGCACGGTAGAAAAAGAAGCCACTTTTCCAATCCTAAAACCACTAG
CCCAAATAAAGGCAAAGAGAAGGAGGCTGAGGATGGCATTATTGCTTATGATGA

CTGTGGGGTGAACTGACTATTGCTTTTCAAGCCAAGGATGTGGAAGGATCTACT
 TCTCCTCAAATAGGAGATAAGGTTGAATTTAGTATTAGTGACAAACAGAGGCCTG
 GACAGCAGGTTGCAACTTGTGTGCGACTTTTAGGTCGTAATTCTAACTCCAAGAG
 GCTCTTGGGTTATGTGGCAACTCTGAAGGATAATTTTGGATTTATTGAAACAGCC
 5 AATCATGATAAGGAAATCTTTTTCCATTACAGTGAGTTCTCTGGTGATGTTGATA
 GCCTGGAAGTGGGGACATGGTTCGAGTATAGCTTGTCCAAAGGCCAAAGGCAACA
 AAGTCAGTGCAGAAAAAGTGAACAAAACACACTCAGTGAATGGCATTACTGAGG
 AAGCTGATCCCACCATTACTCTGGCAAAGTAATTCGCCCCCTGAGGAGTGTTGA
 TCCAACACAGACTGAGTACCAAGGAATGATTGAGATTGTGGAGGAGGGCGATAT
 10 GAAAGGTGAGGTCTATCCATTTGGCATCGTTGGGATGGCCAACAAAGGGGATTG
 CCTGCAGAAAGGGGAGAGCGTCAAGTTCCAATTGTGTGTCCTGGGCCAAAATGC
 ACAAACATATGGCTTACAACATCACACCCCTGCGCAGGGGCCACAGTGGAATGTGT
 GAAAGATCAGTTTGGCTTCATTAAGTATGAAGTAGGAGATAGCAAGAAGCTCTTT
 TTCCATGTGAAAGAAGTTCAGGATGGCATTGAGCTACAGGCAGGAGATGAGGTG
 15 GAGTTCTCAGTGATTCTTAATCAGCGCAACTGGCAAAGTGCAGCGCCTGTAATGT
 TTGGCGAAGTCTGTGAAGGGCCCCCAAGGCTGTTGCAAGCTCCCTCGACCTGAAT
 CGGTTGGGTCAATCGCTTGAAGAATATCACCTCTGGATGATGCCAGTGCTCCTCG
 GCCTAATGGTTCCTTCGTCAGCCCAAGGGGGACCAGATAACTCAATGGGGTTTGG
 TGCAGAAAGAAAGATCCGTCAAGCTGGTGTGATTGACTAACCACATCCACAAAG
 20 CACACCATTAATCCACTATGATCAAGTTGGGGGGAATCTGGTGAAGGGTTCTGAA
 TATCTCCCTCTTCATCCCTCCCGAAATCTGGAATACTTATTCTATTGAGCTATTAC
 ACCAGTTTAAACACCTTCCTCATGTTATGTTTAAAAAATAAATAAATTTAAGAA
 AAGCATTTTAAATAATGCACAGTTGCAGCCTGGAAAAACTTAAGGTGGCGCCTTA
 TAGTATCAATTTTAGGAGCTTTATTTGGTGCATTTAACGCAACTGGTAATTGCAG
 25 AATCCACTTTGCCTGTGTAAGTGA AAAATATAGACTGTTATCTTGTGTTGGCCCTAT
 GAAATTCTGCACTTTTATTATATACTCTACCTTCATTAATTACTTCTGGCAAGAT
 GTTCTGCCTTAGCACTCAGTTGTATTCTTTTCTTTCTTCTGTTTATTATGCTT
 TAATTCTGAGGACCATATGAGGGTAGAATATATTATCTTTTAAAAATTACAAAA
 TTTGTATAGGCAAACCATTTCTTAAAGTTGATGGGCCAAATTTTAAATGTTATTT
 30 TTCATATCATTTATAATCTTGTGACAATCCACTTAAAGAAGTTTGGTTATATTTCA
 GTGAAAATTTTCTTCCAGAGTAGGTTTTTTTTTCGTGGGTTGGGGGGGTAACTTTAC
 TACAATTAGGTAAGTATGGTGCAGAATTCATGCAAATGAGGAGTGCCAGCAGT
 GTGATAATTTAAACATATTTAAACAAAAACAAAAAATGAATGCACAACTTGC
 TGCTGCTTAGATCACTGCAGCTTCTAGGACCCGGTTTCTTTTACTGATTT
 35

SEQ ID NO: 523

>16184 BLOOD 237729.6 AL117521 g5912037 Human mRNA; cDNA DKFZp434P0735
(from clone DKFZp434P0735). 0

CTCATTTGTACTTAGACAAAGAGGCGAGCTGAACGTCTTTCAAAAACAGTAGATGA
 40 AGCATGTCTGTTACTAGCAGAATATAACGGGCGCCTGGCAGCAGAACTGGAGGA
 CCGTCGCCAGCTGGCTCGGATGTTGGTGGAGTATACCCAGAATCAGAAAGATGTT
 TTGTCGGAGAAGGAGAAAAAACTAGAGGAATACAAACAGAAGCTTGCACGAGT
 AACCCAGGTCCGCAAGGAACTGAAATCCCATATTCAGAGCTTGCCAGACCTCTCA
 CTGCTGCCCAACGTCACAGGGGGCTTAGCCCCCCTGCCCTCTGCTGGGGACCTGT
 45 TTTCAACTGACTAGGATGGGTGTCATGTCCCAGATTTCTGTTTGTACCAGCAGAA
 AGAAGAGGGCAAGTCATGGTTGGAAATAACCTTCTAGCCCCTGGTTCTATCCCTT
 CTTCCGCCCAGCCCCCAGCCTCAAGAAAGAACCTCAGACTCTGATTCTCCTCTT
 CAGCCTCTCATCTTGAGCACAGTTCAGAACAGTGGCGACTGGAATCTGGTTTATA
 TTCATATTTGCAAAGACTACAGACTTTTTCTCCCACTTCATATTTTCATGCCCCCC

TGTGTTGGTTTTCCATTCTTAACTGTCTCCTTATACCTAAGAAGTTATGAAAATCATG
 TGTACTTCTGGAAGCTTTTCGAAAGAATCTTGTCCCTCATGACAGCATTTTATCATG
 AAAGCAGCTTCTCCTTTCTGGGCTGGGCTTGTTCAAGTTCGGTGTGGGCTTCCACT
 AAGGCACTTGTCTGAGACGTTGGCTTTCCCAGCTGCATCTGCCCCAAAAGGTT
 5 GTAGGCACAGCTGTCGTAGCGTTGCCATAAAGAGTTTGCCAAATCTCTGATCCTC
 CCTTTCCATTGCTTCTCCTAGTGATGCACGAAGATTAGGTGCATTTATTTTGTAAA
 CAGATTGGAGAATCTAGCAATAAGATTCAAAGCTAATCTGGAGCATAAAGGCAC
 AGTTCAGAGACAGAATAACAGGGATCACAAGCATGAATTAAGGAATTTATTT
 GCTTCAAGTTCCTAGATACAACCTTCCCATGCTGCACTTCTCCACTGTCGGAGCA
 10 CGTTCCGAAAAACAGAATGCCTTGATCCCTGGTGGGTGCGAAGGCAGTTGTTAG
 GGATGGCAGGCATTGGTGGGCTCCAAAAGATGAAGGCCCCACACACAGGTGTGC
 TGCATTTGGGATCTGTGTGGGTGTTTCTTGGACCTTTCTTCTGGGAGTAGGGTAC
 AACTAACGTTTAATCCGCTGTCTGGGTGCATGTCCACAGTACGGTGGCTAAACT
 CGAACATCACTGCAAATAGGACGCTGAGCAGGTCCGTCTGTCATGTCACGCCACT
 15 GCACAGGTCCTTGTCCCCACACGACGGGGAGTACTTGCGTCAGATGTTATTGAAT
 AGCTCGTCTCGGGCAGGGGAAGCGGGGAGTTGGGGATATTAATTGGGGGTTTTA
 ATTCTATTATCATGTCAGCTGACATTATGACTATATAATGTAGTTAGAGACAATTT
 TTATCTTGCTTATAGTAAAGGTTTCAGCCTGCCAATTGTAAATCATTCTAATTTGGC
 AGGCTTATTTTTGACATTGGAAAGGGCAGAAAGCGATTTGCCCCAGTAGTGTAAT
 20 AGGAGTTATAGACCAGAGGCTGAAACCCAAACTATATAAAAAGGAATTCAGTGG
 AGGGGGCTTTGTAATCTCCATTAATTTGTGTTGCTACTTCCAGGATCACCAAAAA
 TTACATGTAATTTTACATGTTAAACACATTGAAAGATAACCTATGTTTATAAAGC
 ATAACGGGCTTCCCTTCCAGAAGCTCTCCTGCTTGTGTCATGAAGTGAGAAGAATGA
 AAAGTCATAGCAGATACTCAGTTTAACTCTGTGTAGAACCTAGTAGTGTTTGAGCA
 25 TGTATTTCAGATTTGAATTCAGACTGTGTGTTGTTTGGCTTATGGACACTGCCTGTC
 GTTCTGTCACTGTTAAATTAATGAGTCTATAAGGTTTTTCTTCCAGAGGCCATAGG
 TGACATCACTAAAATTGCAAGATAAATTGTAATCTTTGCTGCTGCTGCACTCCCC
 AACCTCTCCCCACCCCCCGTGGTGTGCTGCTTTCTAGATGAGCGTGTTTTGGAGC
 AGGCCCATCTGGGACACTCTATGCTTTCACCAAGGAAGTGCGATCTGAGCAGCCA
 30 CAATCCAGCCAAAAGAGGATCGTAGATATTTGCTCTGATCAACTAGATGAAAAT
 ATAGCAGAATGGATTTAGCCCACTGCTCTGTTTTATCCAAGTCTCTGACCA
 GCAATTGGTGCATAATTATTACAGCAAAAGTTAAGAAATGAACTGTAGCAATT
 ATGTAAATGAATGTGTTGGCCTCTTAATACCTGTTACTAGTGGACTTCCTGTGAG
 GAAGTTAGTTTTTTGTTTTGATGAAATGCTTTCGTTTTTTAAATCTTAATTCTGCTG
 35 TCCACATCCTCCCAAAGTGTGCTTACTTCATTTGTTTAATTTAAATGAACTTTCCT
 CTTGTATGTATGAGGTGACTTGGTGGGTGGGGTGGGTGGTTTTTGTTTTGTGTT
 TTTTCTTTCTTAGGGCATCTGTAGGCCTCAAAGGACCTTTCCTTTAGGTCATATTC
 CTCAGAAAGTCTTCAATCTTCCCTTGTTTTTGTGTTGTTTCTTAAAGAATAT
 TTTCAAAGCTTAAATTTGTATATTAATTTAGGACTATTTAGAAGTATAGGCTGTGCG
 40 TTGGCGGCAGCAGTATATTCTGAAATGTCTCATAGATATATATTTTGAATAAAG
 ATGGTGTGTTGAAC

SEQ ID NO: 524

>16303 BLOOD gi|1443464|gb|N90137.1|N90137 zb17h09.s1 Soares_fetal_lung_NbHL19W

45 Homo sapiens cDNA clone IMAGE:302369 3' similar to gb:X17576 CYTOPLASMIC

PROTEIN NCK (HUMAN);, mRNA sequence

GCGNCCGAGTGGCGTCTTGGAGCCCTCCTCAGTGCTGAAGCTGCTGAAAGATGG
 CAGAAGAAGTGGTGGTAGTACCAAAATTTGATTATGTGGCCCAACAAGAACAAG
 AGTTGGACATCAAGAAGAATGAGAGATTATGGCTTCTGGATGATTCTAAGTCCTG

GTGGCGAGTTCGAAATTCCATGAATAAAACAGGTTTTGTGCCTTCTAACTATGTG
 GAAAGGAAAAACAGTGCTCGGAAAGCATCTATTGTGAAAAACCTAAAGGATAACC
 TTAGGCATTGGAAAAGTGAAAAGAAAACCTAGTGTGCCAGATTCTGCATCTCCTG
 CTGATGATAGTTTTGTTTGACCCAGGGGAACGTCTCTATGGACCTCAACATGCCC
 5 GCTTTATGTGAAATTTAACTTACATGGCTGAGAGAGAGGATGAATTATCATTGA
 TAAAGGGGGACAAAGGTT

SEQ ID NO: 525

>16305 BLOOD 474565.9 M18391 g339716 Human tyrosine kinase receptor (eph) mRNA,
 complete cds. 0

10 GCCCCCGCCCGGCCCGCCCGCTCTCCTAGTCCCTTGCAACCTGGCGCTGCATCC
 GGGCCACTGTCCCAGGTCCCAGGTCCCGGCCCGGAGCTATGGAGCGGCGCTGGC
 CCCTGGGGCTAGGGCTGGTGCTGCTGCTCTGCGCCCCGCTGCCCCGGGGGCGCG
 CGCCAAGGAAGTTACTCTGATGGACACAAGCAAGGCACAGGGAGAGCTGGGCTG
 15 GCTGCTGGATCCCCAAAAGATGGGTGGAGTGAACAGCAACAGATACTGAATGG
 GACACCCCTGTACATGTACCAGGACTGCCCAATGCAAGGACGCAGAGACACTGA
 CCACTGGCTTCGCTCCAATTGGATCTACCGCGGGGAGGAGGCTTCCCGCGTCCAC
 GTGGAGCTGCAGTTCACCGTGCGGGACTGCAAGAGTTTCCCTGGGGGAGCCGGG
 CCTCTGGGCTGCAAGGAGACCTTCAACCTTCTGTACATGGAGAGTGACCAGGATG
 20 TGGGCATTACAGTCCGACGGCCCTTGTTCCAGAAGGTAACCACGGTGGCTGCAGA
 CCAGAGCTTCACCATTGAGACCTTGCCTGCTGGCTCCGTGAAGCTGAATGTGGAG
 CGCTGCTCTCTGGGCCGCGCTGACCGCGCGTGGCTCTACCTCGCTTTCCACAACCC
 GGGTGGCTGTGTGGCCCTGGTGTCTGTCCGGTCTTGTACCAAGCGCTGTCTGAG
 ACCCTGAATGGCTTGGCCCAATTCGACAGACTCTGCTGGCCCCGCTGGGTTGG
 25 TGGAAAGTGGCGGGGACCTGCTTGCCCCACGCGCGGGGCCAGCCCCAGGCCCTCAG
 GTGCACCCCGCATGCACTGCAGCCCTGATGGCGAGTGGCTGGTGCCTGTAGGAC
 GGTGCCACTGTGAGCCTGGCTATGAGGAAGGTGGCAGTGGCGAAGCATGTGTTG
 CCTGCCCTAGCGGCTCCTACCGGATGGACATGGACACACCCCATTTGTCTCACGTG
 CCCCCAGCAGAGCACTGCTGAGTCTGAGGGGGGCCACCATCTGTACCTGTGAGAG
 30 CGGCCATTACAGAGCTCCCGGGGAGGGCCCCCAGGTGGCATGCACAGGTCCCCC
 CTCGGCCCCCGAAACCTGAGCTTCTCTGCCTCAGGGACTCAGCTCTCCCTGCGT
 TGGGAACCCCCAGCAGATACGGGGGGACGCCAGGATGTCAGATACAGTGTGAGG
 TGTTCCAGTGTGAGGGCACAGCACAGGACGGGGGGCCCTGCCAGCCCTGTGGG
 GTGGGCGTGAATTCTCGCCGGGGGGCCCGGGCGCTCACCACACCTGCAGTGCATG
 35 TCAATGGCCTTGAACCTTATGCCAACTACACCTTTAATGTGGAAGCCCAAAATGG
 AGTGTGAGGGCTGGGCAGCTCTGGCCATGCCAGCACCTCAGTCAGCATCAGCAT
 GGGGCATGCAGAGTCACTGTCAGGCCTGTCTCTGAGACTGGTGAAGAAAGAACC
 GAGGCAACTAGAGCTGACCTGGGCGGGGTCCCGGCCCGAAGCCCTGGGGCGAA
 CCTGACCTATGAGCTGCACGTGCTGAACCAGGATGAAGAACGGTACCAGATGGT
 40 TCTAGAACCCAGGGTCTTGCTGACAGAGCTGCAGCCTGACACCACATACATCGTC
 AGAGTCCGAATGCTGACCCCACTGGGTCTGGCCCTTTCTCCCCTGATCATGAGT
 TTCGGACCAGCCCACCAGTGTCCAGGGGCCTGACTGGAGGAGAGATTGTAGCCG
 TCATCTTTGGGCTGCTGCTTGGTGCAGCCTTGCTGCTTGGGATTCTCGTTTTCCGG
 TCCAGGAGAGCCCAGCGGCAGAGGCAGCAGAGGCAGCGTGACCGCGCCACCGA
 45 TGTGGATCGAGAGGACAAGCTGTGGCTGAAGCCTTATGTGGTACCTCCAGGCAT
 ACGAGGACCCTGCACAGGGAGCCTTGGACTTTACCCGGAGGCTGGTCTAATTTTC
 CTTCCCGGGAGCTTGATCCAGCGTGGCTGATGGTGGACACTGTCATAGGAGAAG
 GAGAGTTTGGGGAAGTGTATCGAGGGACCCTGAGGCTCCCCAGCCAGGACTGCA
 AGACTGTGGCCATTAAGACCTTAAAAGACACATCCCCAGGTGGCCAGTGGTGA

ACTTCCTTCGAGAGGCAACTATCATGGGCCAGTTTAGCCACCCGCATATTCTGCA
 TCTGGAAGGCGTCGTCACAAAGCGAAAGCCGATCATGATCATCACAGAATTTAT
 GGAGAATGGAGCCCTGGATGCCTTCCTGAGGGAGCGGGAGGACCAGCTGGTCCC
 TGGGCAGCTAGTGGCCATGCTGCAGGGCATAGCATCTGGCATGAACTACCTCAGT
 5 AATCACAATTATGTCCACCGGGACCTGGCTGCCAGAAACATCTTGGTGAATCAAA
 ACCTGTGCTGCAAGGTGTCTGACTTTGGCCTGACTCGCCTCCTGGATGACTTTGAT
 GGCACATACGAAACCCAGGGAGGAAAGATCCCTATCCGTTGGACAGCCCCTGAA
 GCCATTGCCCATCGGATCTTCACCACAGCCAGCGATGTGTGGAGCTTTGGGATTG
 TGATGTGGGAGGTGCTGAGCTTTGGGGACAAGCCTTATGGGGAGATGAGCAATC
 10 AGGAGGTTATGAAGAGCATTGAGGATGGGTACCGGTTGCCCCCTCCTGTGGACT
 GCCCTGCCCCCTCTGTATGAGCTCATGAAGAACTGCTGGGCATATGACCGTGCCCCG
 CCGGCCACACTTCCAGAAGCTTCAGGCACATCTGGAGCAACTGCTTGCCAACCCC
 CACTCCCTGCGGACCATTGCCAACTTTGACCCCAGGGTGACTCTTCGCCTGCCCA
 GCCTGAGTGGCTCAGATGGGATCCCGTATCGAACCCTCTCTGAGTGGCTCGAGTC
 15 CATA CGCATGAAACGCTACATCCTGCACTTCCACTCGGCTGGGCTGGACACCATG
 GAGTGTGTGCTGGAGCTGACCGCTGAGGACCTGACGCAGATGGGAATCACACTG
 CCCGGGCACCAGAAGCGCATTCTTTGCAGTATTCAGGGATTCAAGGACTGATCCC
 TCCTCTCACCCCATGCCCAGTCAGGGTGCAAGGAGCAAGGACGGGGCCAAGGTC
 GCTCATGGTCACTCCCTGCGCCCCCTTCCCACAACCTGCCAGACTAGGCTATCGGT
 20 GCTGCTTCTGCCCACTTTCAGGAGAACCCTGCTCTGCACCCACAGAAAACCTCTTT
 GTTTTAAAAGGGAGGTGGGGGTAGAAGTAAAAGGATGATCATGGGAGGGAGCT
 GAGGGGGTTAATATATATACATACATTACACATATATATATTTTTGTAAATAAACA
 GGAACCTGATTTTCTGCCTCCATCCCACCCATGAGGGCTGCAGGCCTACAAAAGA
 GGTGACTACTGAGAATTCTGGAAAAACAAGGTCTGGGCTCTAGCAGTGTGGGACTT
 25 CCGACAGAGCACGTGACCGTCCAGGGGGAAGCAGCCATTGTCATCTGCCTCAAT
 CGACAGGGGGCTTCCCGCAGTCCTGGGAAGAAGGAAGGGTGAGGGGCACTGGACC
 GGAAGGCCCCCTGCTCTGCTCCACCCTACCCACCCCATCCAGCTCCATCTTGAA
 TTAGAAAGATGCTTCATGGCTCAGAGCTGGTGTATCGCTTTTCCAGCCACACC
 CAACTCCCCATCCCTATCCTACTTCCAGTCACCCACTAGGACCTTCTGCAAGAG
 30 GGCAAGCAGTGGGTAGAGCTGCTCCCAAGGTGCTTGCTCCCCTGCCACCAACCAC
 CCTAATAAAATAGAGGTTGGCTCACCTCCATTCGAAGACCTCTTCTCTCAGCTCC
 TGTTTCCCCATCCCCTACCACGGTAAAACACCATGCCCTTCTTCTCTCCTATTGGC

SEQ ID NO: 526

35 >16466 BLOOD Hs.6820 gnl|UG|Hs#S2451360 601487048F1 Homo sapiens cDNA, 5' end
 /clone=IMAGE:3889762 /clone_end=5' /gb=BE875609 /gi=10324385 /ug=Hs.6820 /len=915
 CTTCTGAGCTTTCTTCCTCACCAGTGGGCTGTGCTTGTTCATTTCTGTACACCCTT
 ATTTTATACCGTTTTTCTTCAACAATGGCGAAATTGACTGTAGTGCTGAACCAAA
 AGTATCCCTTTCCCTCCTTATTCCTCACCCCAAGAACATTCTAGATCACATGGGTG
 40 CTTGTGCCTTCCGATTTTCTTGCATTTGTTTTTTCTTGACCTGAAGTTGTTGTTAC
 AAAATCAGTCAGACTTTGTGGGCTGAAGGACACGGTGCAGCAGAGGGTGTCCCT
 GTGAGAGTTCTGCAGAGTGCTGGGCATGTGCCTGGAACCTACCGAGTAGGAGCCA
 TTTCTTTGTACCCCTGCCTAATCCATTCCTCTCCTTCCAAGTCCATTGTTGCAAGC
 AATATTCTTCTCAATTTTTATATGTTTACTTTAAATCAAAGTTAGTCTATTTGTATA
 45 AAATTTTTTAAAAAATCTAAAAGAAAAAGAAAAAACAAGGGTGGGTGGGTAT
 TCCAGTGGGAAGATCATTGAAGGGAAAAAATGTTACTATTTACTGAGGTATTTT
 CACCAGAATGATTGAATTAATAAATCAATTGCATTTTCATTGTGGGTGCTTAGA
 GAAGTTCTACAAAATTCACACCTGGCAAGGTATGCTTCATTTAATTATGGACCC
 ATACTTTTCAATTTCTGAAGATACCGGAATTCCTTATGAATCAAAAGAAATTTTC

ATTCCAGTCAACGCACGCGGCGGACTCGCGAATTCCAAACGGGATCTGCTGAGA
CCTCACAGAGGTGGGCCGCGATTATAAGGACGGGATGACATATCTTGAGCCACG
ACAGGTCTCGAGGCCCCCAGTACGAGACACGGAGCAGGGCTGTGACACCCCACG
CAGGCAAGAGCGCTAGGATGCACAGCACACCC

5

SEQ ID NO: 527

>16524 BLOOD 474681.7 D50525 g1167502 Human mRNA for TI-227H. 0

GGATTTGGAGCGGCCGGGGAGGCGGGGGTGGCCGGGGCCGGCTTGAGAGGCCTGG
CGCCACCCTTCGGGGCCTGCAAGGACCCAGTTGGGGGGGCAGGAGGGGGCCGGA
10 GGATGGTTGGTTGTGGGATTTCTACTTTGCCTTTTCTCCTTATGCCGCCTTAGTG
AGGGGCGGGAGCTCTGGCGGCAGCCCCGGGGTGGGGAGACGAGCTCCGGAGTC
GGAAGAGCTGGGTTTTCTTCCGGGCCTAGCCACCAGTTGGCGGAGTGACCTTAGG
CGAGTCACTCTGTAATTTGTCTGCGCCTCAGTTTCCTCCTCTGCCTATCAATGTGT
GTGGGGTTGAAATCGCTTTGTAACTATAAAGCGTGGGTGTACGTAAAGGATGG
15 TTATTGTTTATAATTTTTTTTGTAGTTGTAAGAAAACCTTAGCAGTTCCCCAATCCTT
GGGTTTTGAACCTGGGAACCTTGGATTGGAGTTGGGGATCCCCAAACTTCCTGAA
ATTGTGGGAATGTGCGGTTTGGGGGAATGATGGGAATTTGTGGGAATGTGCGTTT
TAGGGGAATGATGATCCATCGCTAGCAAGTTTTCCAAGGGGGCTGTGACCCAGA
AGAGTTAAGAATCACAATTTCTTCATGCTACAGAGAGGAAACTGAGGCCTAGAT
20 GTCATTTGGGACCCTTCACAACCATTTTGAAGCCCTGTTTGAGTCCCTGGGATAT
GTGAGCTGTTTCTATGCATAATGGATATTCGGGGTTAACAACAGTCCCCTGCTTG
GCTTCTATTCTGAATCCTTTCTTTTCAACCATGGGGTGCCTGAAGGGTGGCTGATGC
TATATGGTACAATGGCACCCAGTGTAAAGCAGCTACAATTAGGAGTGGATGTGTT
CTGTAGCATCCTATTATAAATAAGCCTATTTTATCCTTTGGCCCGTCAACTCTGTTA
25 TCTGCTGCTTGTACTGGTGCCTGTACTTTTCTGACTCTCATTGACCATATTCCACG
ACCATGGTTGTCATCCATTACTTGATCCTACTTTACATGTCTAGTCTGTGTGGTTG
GTGGTGAATAGGCTTCTTTTTACATGGTGTCTGCCAGCCCAGCTAATTAATGGTGC
ACGTGGACTTTTAGCAAGCGGGCTCACTGGAAGAGACTGAACCTGGCATGGAAT
TCCTGAAGATGTTTGGGGTTTTTTTCTTTCTTAATCGAAAGTTAACATTGTCTGAA
30 AAGTTTTGTTAGAACTACTGCGGAACCTCAAAATCAGTAGATTTGGAAGTGATTC
AAAGCTAAACTTTTTCTTGGCCCTCCTTGTGTTCTAATTGCTTGCAAGTGTAATA
CTAGGATGTCCAAGATGCCAGTTTTTGTCTTCTTGTAGTTGTCAGCTGCTTTTAT
CAAATTTCAGGCCATTATCCAACAAACACTATAAAAATGTTTGAACAATTGGATT
TCAAACATTTTCGTTTTGTGGAGTGGTGTCTACCAAGTGGTACAGCCCTAAGCAA
35 GTGAACACAAACACATTTAAGTGTATTTTGTCTGATTAGATGTTAGCCAGTTATG
CTATTTCAATCAAATGTCTGAAAAAATCAATTGACTATTCCCTTTTCCTAAAGGGC
AGAGACAGATAATCTCACTTCCAGAGAAATGACTTGGAGAAAAAAAAGTGTTGG
TCTTTTTGCTCTTTTGTAAATTAATCCGGATGTACCTCAAAAGACTTAAGACTGTG
GTGATAAGATGCTTTCCTCAGCAGAAAGGAGGGGAAAAAAAACAACCTGGAACCTCA
40 AAGCTTGAAATTCTGTGGCAAAACATGAGATGTCCAGGATTGGAGGTTGAAAAG
ATTTCACTACAGTGTTCTGCAATAGTTGGAGCAGATAACTTTCAGTGTAGCCACA
GCCATGGACTCCAGATTTCCAGATTTTCAAGACCTGGACCTGGAACCCGAAAGA
GCTTGTACGATGCGGCAGGAACACTGGAGGTAGATTTTTTTTTTATTTTGAATTT
TGGGACTGTTGACCTTGCTGTGAGAAAAGAGACAACGACTGAGCAAGCACTACC
45 ACCAGCACTGTTACTGGGAATTAGAAGACCTGAGTTTCTGTCCAGACCCTCAGTG
CAAACCTGAGGATGCTCCATCCAAAGTGAATTATGTCCTGTGCCTCCTGATTGCTG
AGTGTTACCTGGACCTTCTGACTACCTTCCTGTGCTATTCCATCAGCCTACAGA
CCTGGTACCTGGATTTTGGCCGAGATGATTCCTACCACCTTACTACTGACGAAG
ACACCCATTCCAGTGGACCACTGTGACCCAGGAGGCATTCAGCCATCATGATGTG

GCCTTTACCTCCACTCCTGTCTTGTTCTACCCAGATTCAGCACAGCCCTTTATAGT
GAAGTCAGAGTCCTCAAGCCAAATAGCTAAAGCTGTTTTATCACAACAAAGGCC
TAGTTTGTTCATGAGTGTGCATTTTCATTTCTTCAGTTAAAGCCTTCAGAGACACA
CAATAAATTTGGACCAGGGGATTTTTTAGTTATTAATGCTCTCTGAAGAAAGGCA
5 ACATCTTTTTTGAGAGCAGCATTGGACCACACCCCAACAATCTCAAATGATTGAAAT
TCATGAACATCTAGGATCCCGTGAAGGTCACCTGGACCCTGTTTTTCTACTTCAA
ATCCTGTAGTAGCCTACTGAATGAGAAAACATATTCTGACCCATTGGGATCAAAT
CAAAGGCACAGTGAACCTCCTCATAGCATCTTCTTTGGAATTACTCAGGAACCAGA
ACTTTTTACACAAATGTAAGAAATTCTACCAAGGAGTCCCCTTACCTAACAGCAT
10 CTCACAAGGCTGCACCAGATTCCAGAAAAGGCTTCTCTTGATACATCAAGGTAGA
ACCTCTATGCATTTTGTGACCGACTTATTCTTAGATCATTGGTTTTCCAAAGGCTT
TGTGGCCATGAAGCCCTTTGAGTGAAAACCTGTGCAGAAGCCCAGAGTAAAAGTG
AAGCTGCTCTGGATGAAGTAGTGAAGCAAGAGTAGGGGCCTGAATCCTGCTACA
ACTATCTTCCTTTACCACCGTGGTGACACCTAAGGGGACTTCCTTACAACACCTT
15 GAACTCTTCGAACACAGTTTGAAAACCACTGCCCCAGACAGCAATATGTTTGAC
CTGAATGGCATTCCAATCTTTTCTGTACCTCCACTCAGCACAGTTCATGTTTCAGTA
GATGCTGAACATTCTTAGAAATACTGTGTGTGAACTTAGAAAAGTGCAAGAAGA
CAGGCATGTCTTTGACCCCAGGAATGATCATTGCTGAAGATGGTGTCAAGTGAA
CCTAGATTAACAGCCCTCCACTCCAGATGGATATCCAGTGATTCTAGAAATGGGA
20 TATAGCCAGAGAACAAATTCTATGCACCCTACACTGACAGACTCCCTTAAGCAACA
CCAGATGCTCTACTGGTACTTGAAGTACATGACTTTGAAGTCTTGACCCTCCATG
AATAACCTGAATTATCAGCAAGCGGGTTTTGAAGCTGGTGCCTCATTGAGGCCATA
CTAGAGCAACTTGTACATTTGACCTCTGTATCAGCCATGGTACTCTACTTCGTG
TGCAAGAGATAACTATGAAAGCCAAATTCAAATACTGGCAACATTTCTTAAAGG
25 GGCTCAATATCTTATCATTCGTCTTCTTTTCCAAACTACACATCACTGTATGACTC
AACCAGTAGCAGTTATATTGCCCTTGGTTTTTATTTCAGTTTAACTACTGTTTCCA
AGATAAATGAGCTAATAAGCTTTAAAAAAAAAAAAAAAAAGGCTGAATTCTTTT
TTCTTCATCACTGGCATATCTGCCTATTCTCCAGAATTATTATGACTATTCAGCTC
ACTTTAACAGTTGAACTTCAAGCGACAATCTTTGAACACCCCTTCTCATGTGATTT
30 AAAATGAAACCATTTGGAAAAGTTTCTTCTAGCCAGTAATAGATTTTTTTTTTAAT
TGCTCTGCCTTGTGCCGAGAGATGTTCTTTTAAGATGAATCTTTTGATGTCTGATA
CCACCAAATATAGGTGGTAGGGAGAGTTGGAGGCTGGCCCTTTGAGCAGGCCAT
TAGCTTACTTGCTGGGCATTTCCGATAGCTTATTGCCTACCTTTTTGCTGGAAACA
AACTGATTTGAAAAACAAAATCTATGAAGACTGCAGCTAAGGATTTTATCGGTA
35 GACTTAAGAGCTTTTGTCTTGTGGATATTTAGTGGAACCACATCAGTCTCAAT
ACTGTCATTTTACACTGACTCAGAGCAGCTGACTTCATTCCTTGCCATGATATATA
TTTAAGGCAGGCATTGTAACAGACATAAAGACAACCTTATCTGTTTCAGCAGGAA
GGATTCAGTTTATGAACTCTCAGACCAGATCATGTTGAACAAGGAGACTTTGATG
TGTGTCATGAGAAAACCTCATTCTTTACTTCCCAGTCAATTTAAAGGCCAGCTATC
40 CTGAGCTACTCGAATGAATGCACTGGTTAAACATTGGAAATAGTTTGTATATC
CTTGCTCTCTCTAGGCCAATTGTGATTACATGACTCGACTCTACATCTCGTCAAA
CAAGGCCTAGGTCTGGTTGCTGTAGACTGCTCGCCCTCAACAAATAAAATCTGGT
TGACTAGCCTCCTTGTATATACTAATTTGTTAAGAAGAAATTATCGTCAAT
TTTCTACTACCTTCCAATTGTCAGCTCTTTTTTCTCTCTGGTTTTTCTTATACTTT
45 ACAGAAAAAGACATTGATCTATACTGCCATTCCTCTAATCCTGCCATACTCAGT
CAAAAGGAATGACTTAAGATGAAGATGATCATCTGCTCGAGTCTAAAATATACA
TTGTATATAAGAATTGGTGATTAGAAAAGCAAAAACCTAAAACCTTAAATCTAG
GAGTCTGTATACTGTCTCCATGTCTCCATGCCTCAGATCTCATCTAAATCTTTGAA
CAGCACCATTCAACCAATCTGAGGCCTTGACTTGCTTGTAAGATGATTCTCAGAG

ATCGGCTGAGTTAAAAAAGATGACGACTTGATTACCAAAGAAAGTAGGGCCAAC
 TTTGACAAATCTGGCTCTGCTGACCCTGTCACCTCCCAGATGTAGCATAGACTCCT
 AACAGAACCTCAAGTCTGATTGAGGATAAGGCCTTCTCCTGAGCTGAAAGTTCT
 TTGGCAGATGAGCAAGAACTGAAAGCTGATGTACCTGACTGGCTCTGTAAGAT
 5 CAGAAAAGTGTATCCAGAATAAGCCCTATGGATTAACCCCTGAGTACCCAGAGT
 AAAAATAATTTACAGAACTTCCTTATTGATCTGCTGGTTCTTCCAGATCATATTC
 TGGCTATTGGTATGGCTGGCCTTTCTGAAGGTACCCTGCTTGTCTATTTTCCTGAC
 TCAGCTCTTGCTGCCTTTTTTCACATGTTGCTGCAATTAGACTCACCGTGAGGACT
 ACAGTCAATTTTCAGTCTATCTTGTGCCCAATACAACAAGGATTTTTAATAGTAAC
 10 AACCCACACCTCACCCACTAGGACTCAATGTTCAACAGGAAGGACCATTGCT
 GCATACTCCTTGACCAGCAACTTTTTTGAAGATATTTTAAAGTGACAGAGTAGGCC
 TCTATTCCTGTATGTAATTGTTCAATTTTCAGCACCTGGAACCTCATCTATCGGGTC
 TGGAAGGAATACAGCAGTTCGAAAGCCGCGTCCATTTCTCTCCTTCAGTAGTGCA
 GAAATGAGTCCGATTACCCAGTACACACAGAACTGTACCAGTTCAACCTAGCAA
 15 AAGAAGAAAAGTTTCCACTGTACTTAAAATTTACAGCTGACTCAAATTGCCTCAC
 AGAATTATTTGATGTAGAAGGCTAGTTGTCTTACTTCAGATCAGCAGGACAGTTG
 GGCTCTCAGACTCATGACCCTGAGTTTGCTTGTGTTGAAACTGTGGTTTCATCCA
 ACATATGCTATTGGACATGATTATTATTCCATTCAAATGGATTACAGACTTCTTGA
 GGACAGGACAACTTATCTCTCATGGTGTTTTTTTAGAATACTTTTATAACCAAG
 20 GAAGAAACCATGCCAGCTGTTACCATTCAACTTCTTAAGCAGAGATTAAGCTTTT
 TCATATCTGTTCTTATCCTGGACATCAGTAGTTTTTAATTGCCCAGCATCCGTTCC
 ATCTTGTAACAACCTCCCTGATGTTCTTAAACCACTCTTCTTATTTTCAGTCTG
 TGGTTTGGACAGTCTGACCGAAGCTTGAGCTTTGTGGGTGAACATGTAATTCAGAT
 CCTCATCAATCAGCAAATCCATCTGAACTGTGGAGGAGAAGCTCTCTTTAAGTGA
 25 GGTGCTTTAGCTTTGTAGGATGAAAACCTCAAACCTAACAGGGGCCTACCATGTAGA
 GAATGAAGCCAGTGCAGGGGAAAGCAGAGCCAAAATATGGAGAGACTTGAATC
 CTGATGACAGCGTTTGTGCCCCTGGATCCAACCGTGCCTGAAGCTAGAATATCCC
 CTGGACTTTTCAGTTATGTGAACCAATAAATACCCTTTTTTGTCTTAAGTTACTTTG
 AGTTGGGTTTCTGTTACTTGAATTTGAATCCACACTAATATATCTACCAACATTG
 30 AGACTTGACAGATCCAAGTATTTATTAAGCTAGAGGTCATGGTCACTGAAATTAC
 TTTCCAAAGTGGAAGACAAAATGAAACAGGAACTGAGGGAATATTTAAGATCCC
 ACAGAAGCGTAAAAATGACATGGTAGAAAGTAATAGAAAACCTAAATGTCTGTC
 ATTAAAGGATAGGTAAAGGTGTGGTTCAGCCATATAGGAATATCTCGTATCTGTT
 AAAATGAATAAAGTACATTTCATTGTGTATGGAAAAATGGCCATGATACATTAGG
 35 TGAAACAAGTTATTAATAGAAAAGTGTACAGTGTGAACTCATTTTAAAATGTGTG
 TGCTTATGTTTATAAATGCATAGAAAGGTCTATTACAGCTTTCTTTGAACAGTGT
 AGATCACATGAAACTTTCAACTTTATACATTTCTGTATTAATATTTTACACTACCC
 ACATTATTTTTAACTTTATTTTAAATAAAGAATTTTTTAAAATT

40 SEQ ID NO: 528

>16759 BLOOD GB_R09836 gi|761792|gb|R09836|R09836 yf30b12.r1 Soares fetal liver
spleen 1NFLS Homo sapiens cDNA clone IMAGE:128351 5', mRNA sequence [Homo
sapiens]

AAGATCACAAAGGTTTACATCTGGCACAAACGTAGTANACCTGCCAATTGCGGAC
 45 TCAGGGGCACACACGTACAGTAACTGTGTGAGCTGGAACCCACAGATTCCATC
 CATGATGGCCAGCGCCTCAGATGATGGCACTGTTAGAATATGGGGACCAGCACC
 TTTTATAGGACCACCAGAATATTGGAAGAGGGAATGCAGTAGCATGGGATAGTT
 TGATGGGTGATTTGGGAGCAGACGANTTCTTGTTTTAACTTTAAATTTAGTTTCGTA

TTTTTAATTGGCTTNGGGGTTTTTGGGTGCCAAACCAAACNTGATTTGATAGCTTG
GGACAGGACATGCTTCCGT

SEQ ID NO: 529

5 >16991 BLOOD 978861.1 Incyte Unique

CGGCCCCCACCTCTGCCTCCTTCTACTCGGGCGCCCCGGCCGCCGCGCCACCTCTCCC
CAGCCCAGGAGAGGCTGCGGAGCCGCAGCCGCCAGACCGCGCAGCGCGGGGA
GGCAGGTTCCGCACGAAATAAATCAGAATGAGTTATGCAGAAAAACCCGATGAA
ATCACGAAAGATGAGTGGATGGAAAAGCTCAATAACTTGCATGTCCAGAGAGCA
10 GACATGAACCGCCTCATCATGAACTACCTGGTCACAGAGGGCTTTAAGGAAGCA
GCGGAGAAGTTTCGAATGGAATCTGGAATCGAACCTAGTGTGGATCTGGAAACA
CTTGATGAACGAATCAAGATCCGGGAGATGATACTGAAAGGTCAGATTCAGGAG
GCCATCGCCTTGATCAACAGCCTCCACCCAGAGCTCTTGGACACAAACCGGTATC
TTTACTTCCATTTGCAGCAACAGCATTGTATCGAGCTGATCCGCCAGCGGGAGAC
15 AGAGGCGGCGCTGGAGTTTGCACAGACTCAGCTGGCGGAGCAGGGCGAGGAGA
GCCGAGAGTGCCTCACAGAGATGGAGCGTACCCTGGCACTGCTGGCCTTTGACA
GTCCCGAGGAGTCGCCCTTCGGAGACCTCCTCCACACCATGCAGAGGCAGAAGG
TGTGGAGTGAAGTTAACCAAGCTGTGCTAGATTATGAAAATCGCGAGTCAACAC
CCAAACTGGCAAAATTACTGAACTACTACTTTGGGCTCAGAACGAGCTGGACC
20 AGAAGAAAGTAAAATATCCCAAATGACAGACCTCAGCAAGGGTGTGATTGAGG
AGCCCAAGTAGCGCCTGCGCTTGCGTGGTGGATCCAACACCAGCCCTGCGTCTGTG
GGACTTGCCTCAGATCAGCCTGCGACTGCAAGATTCTTACTGCAGTAGAGAACTG
TTTTCTCCCTTGTACTTTTGTGACCTGGCATCTTTTATAGGGGAAAAATGGCC
TTTGTAGGCAGTGGAAAACTTGCAAGGAAAGCTGCCGTCTCTTTGGCAGTCTGAT
25 GCAGAGCCTGCACTCTGGCACTCGCTGAAGAATCTGGAAGGTTGCGGTTTGCTCT
TCCAGTGTTTCGGGGGCTCTGGCTGCTGAAGGATTCCGTCTACCACGGAGGGCTG
TGCTGTTAGGCTGCATCCCACTCAAATAACAGGAAAAGCACGAATCATGATTCTG
CTTTCTGTTAGCTTAGGCAGACATTGGGCCTTCACCTACAAGTTTTTCCCTTACCCC
TGTTGGTTTTTGTGTTTTTTTTTTTTTCTTTTTTCCATAGGAAAGAATATATAAATTTGT
30 AAATCCTAATTCAAAGATGGCTCGTGTGTGAGGGCATTGAGTTTGATTTGTTTTT
CCTTTGGTCTGGGTTGTGTGGCTTTTGGGGGATGCGTGTGAGGGGGCTATGTGTT
TTTTAATTTTTTAAATATATATTTTTGGTGCTGTGTGTGGTAAGAGACTTGTTCTTA
GTGGATCAATGAACCATCTCTTCTGGGCAGTTTTTGTGAAAATAAAGGTTTCTCTT
TGATTTCAAGAATGACCAAATGGCCTCTAAAAGATGTTAATCATCTCAAATGAC
35 CTTTTGTCTTTGGGGCGTTCTTCCCCCTGTGATAGCGGCAGTGGCTTTTTCTGGTA
CCTGCAGCTGGAAAGGCCACTTGGCCCTGTGCTGAGTGAGCGGCCTTCATTAGAG
CGAGGCAGCCCTTGGCCGGTGGGGACGCAGAGCCCCAGCAGGTGGTGCACGACT
GTTGGCGGAAGGAACGCGTGTTTCATCCTCAGTGATCTGCCCTCCAGCATCTCGGC
AGCATCTCATCCTCCATCGTCAGCTGGCTCTGCCGATGTCCTGCTTCTGTTCACTC
40 ACAGAACTGTCCCCTGCTCCGTGGTGGGCAGGAGGGAAGTGGTGCAGGGCTGCG
TGCATTGCCTGCGAGTCGGGACAGTTGATGGGCACATGGCCTTGATGCTCTGGGC
ACAGATGTGTTTGGATTCAATTGCAGCGGACCACGGGCACTGTTGACCCCACTGA
GCAGTGCTAAGTGTTGGTTTAGTGATGTTTCGTGGAATTGCTGACCCATCCAAGG
GCGTCCTTTGGAGCCAGTGGAGCCTGCCGGCGCATCTGAGGGGCAGAATGCTGC
45 TAGCACTTGAATCTGGGATCTCGCCTTATTCTCAAGTAGCAAGGCATCTCGACAA
GCATGGTCTAGGTCTGGTGGCCAGCTTGCCAGTACCTGAGCCGGTCGGGTCATCT
GCCTCTGAGGGACCGTCCTCACCGAGCTCCTGCATCCCTTGAGTGTTGATCAGGA
GGCGTCCACAGCATTGTTCTCGCCTCTGAATGATGCTTCTTTCTGTGTTGGAGCCT
GGCGAAGTTGTGTTTTCAAGCCCTCTACTTCTCTTCCAGTGGGTAGGAGCTTTTG

GCAGTGTTTACTTTACCTAGATGGCTTATATAATCCAGTAAGAGATGCAAAGATA
 AAATTGCTGCGGTGTTACAGAAGCATGGCGGCCTCCAGACTGACCCATTGGTTG
 CCCTTTAGATTTTGTAAAGGATGCGGTGCTGGGGAGGTGGTGCTTCCCTACCACCT
 AGAAATGCTGCCTTCCAACTACCACTCTCCCAGATGTGACCCTTGCGATTATTTCC
 5 TCTGAGGTTTGAGGATGAAGATAAGTTGGAGGGAAAGAGAGTAACATAAGGGG
 ATGAAATATAGCAGAAGCTAGAAGAAAGCGGTGAGGTGAGAGAGATGCATCTG
 CACGTTTTCTTCAACAGCACCAGGTGATTCAGCATATTCCTAATTACCTTTCACTA
 TTCGTGTATATAAGATCGTTTACTTGCATAATATATCATCAATTTGACATATTCTT
 AAAACTAGAGGGTGTGAGAAGCACAGCAATAGGAAGTCTCTCCACAACTAGGG
 10 GAACACAAATGGGGTCATTACGTGCCTGGACTGTCCTATGTGGCTGTCACGTG
 AAGTGCTGGTGTGATTTCCATTTAGCCAGTGGGTAGCTGATAAGCCAGTGCCA
 GCATCCAGCATGAGCAGATGTCGGGGGAGACTGGGAAGTCTCCAGCGTTACTGCT
 CTCCTTCCCTTCATGATAAGCCAGTGCCAGCATCCAGCGTGAGCAGACGTCGGGG
 AGACTGGGAAGTCTCCGATGTTACTGCCTGCCTTTCCTTTTCGTGTGAGGGGCTGCA
 15 CTTGCTTTTCTTGTGATCTGTTAGTGGACGAGGTCTTCCAAGGAAGTGCTTTGCAC
 ACTTTCTTTGCTCCTTTTTACAGTCTTTGTCTTTGCAGCAAGCAAATGAAATTAAG
 CCACTTTGGGATAATGAACATTCAGTATAATTCTACTTTGTCTCATTTTGGATCTC
 ACTGTTGTCTTTATAAAAATGGCACATTTTACAAAGTAGTTTATTCTTATTATACT
 TTCTGCTGGAGAGTGCCTTGAAATAAAATGTGAGAGTATTCTGGTACTCTGTGTT
 20 CCAGATGCATGAAATTGGGTGAGGAATAACCCCTAGTCTGGAATCTTTGTGAAGC
 ATAGGGTTATTGCAAGGCAAATGGGAACATAACACATCTTGCCATTTGAATCAGG
 GTCTCCAGTTTCTAGAAAAGGCAGACACTGGTTGGGACCAAAGTCTCCATGGCAAC
 ATGACTGAAGACTGGTGGTTCGTGTGTGTGCGGAGTCCACGGAAGCCTCGGGGAG
 GTGGAGCTGCTCCTTCCATTCGTCAGGACGTGATCTGAAAACATGTAGAGAAGAA
 25 TGAGTTGAGGACAGCTTTTCTAAGGCAATGTGATGTCTTTGCTTTCTTATTCTCT
 TTCTCTGCGTTGTTAGTTTTGAAGAGTGGAGGAGCTAGGGGCTCCAGAAAGAATC
 TTACACATGTGTTGAAGACATTGATGTCATAGGGAGCGGGGAGCTGCATTCCCTT
 CTGGGCTGTTACTGCTAAATCTCAGTATGAACAGACCAGGCGGAAAGCTTGGTG
 GCCAAGCAGTCTGTGTGCTTCCCCGCTGATGGAGAACGTTGCGTTGTTCAACAATA
 30 GGGCCTCATGGGTGTAGCCGCATGGCAGACCCATGGCTGGCGCAGCTGCCTGTTG
 CCGTCTGTCTTCAGTAACTGCTGCTCTGTTAACTGTTCTATTCTGATACTACGCGT
 GTTGTTTTTTACAACAGGTATGTTTTTGTTCAGAAATATGTATTGCTTTTCTCATA
 TTTTTTGCAAATTGTATTGTCAACATGGGTCAATTTAAAGTCCTGTATGAACCATAA
 CCTGCTGTGGTACCTTTGTACATGTTTGATTCTGTATTCTTTATTCCAGTGTGGCA
 35 TATGTGCCCTCTGTATCTTTTGAGAAGTGCGGAATAGGTTGCTTCTACCACCTGT
 TCTTAATGTAACAGTAAAAGTTTTTACATTTTTTCTCAGAAAAAAGGG

SEQ ID NO: 530

>17028 BLOOD GB_R25895 gi|782030|gb|R25895|R25895 yh43f12.r1 Soares placenta

40 Nb2HP Homo sapiens cDNA clone IMAGE:132527 5', mRNA sequence [Homo sapiens]

TNTTNACTGTGCCGTTTTAGTGGTTTAGGATAAAAATGCACTTGTGAAGCAAATG
 TAGTGCCAACAGAAGGTGATTTTCCAGTTGTAAATGTCATGCAGCATTTGAAGGG
 ACTGTGTTTTCTTAAAAAATCACAGTTACTTCTAAACCAGATTTCAATTTCT
 TTTATTGTTTTATGTGCCAAACCACGAAGGCCATTGGGGCTTCAATCTCTGGAA
 45 CACTGTAGGACCCATTAGGAAGGACTGTTCCCGATTGTTACAANTGTAGTGCCNG
 GAAAACACTCTTTAGGCTGATGTCTTTAACCAAAATGGAAGGTTCTNCCAAGGGC
 CAAAAC

SEQ ID NO: 531

>17066 BLOOD GB_R27082 gi|783217|gb|R27082|R27082.yh52b06.r1 Soares placenta
Nb2HP Homo sapiens cDNA clone IMAGE:133331 5', mRNA sequence [Homo sapiens]
GCACCGCACTGCCGCCTCCTGACTGCCCTATCCCCGCAGCCCCTGTGCCGGATT
5 TCATTTCCCTCCTCTCTCCCAGGGTACCTGGCNCACAGCACTCTCCCATCTGTTCT
TCAGGAACCGACTCCTCTCCAGTTGCAACACCAGGGGAGAAAGGGGCCTCCACA
TGCCCAAGTACCCCTGCAGGATGAAGGGCAGGCCGGCCCTTGATGTGCCATTTCT
GAATAATAGTCACTGCCGCCGAGTCTAGGGATGTCCTGTTTTTAAGTTAGCCCTG
CCTTGGGATGC

10

SEQ ID NO: 532

>17168 BLOOD GB_R33030 gi|788873|gb|R33030|R33030.yh70d06.s1 Soares placenta
Nb2HP Homo sapiens cDNA clone IMAGE:135083 3' similar to gb:D16234 PROBABLE
PROTEIN DISULFIDE ISOMERASE ER-60 PRECURSOR (HUMAN);, mRNA sequence
15 [Homo sapiens]

TTTTTTTTTAAAGGGGTCTCATTTATTGTCAGTGTTCCAAATGTACAAAAAAATT
AGAAAATACCCCAACTCAACCCACCCCAACAACATTTCCCAACACAAATA
ATTTTCCCAAAACACAAACATAAACTGGTCCNGGGGATTTCATAAACAGTGC
AGCTAAGAAACAGTTTAGNGAAANTTTAACAGGGNTTCAGATTATATCCATTCTG
20 TCCTCTCGGGCCCTGAGNGGGTAATAATTCCCATATGGGGNCCTAGGTCCTCCCC
AATGGGTTTTCCCATCTCTGATGGGGAGGAGGTCCTTTTTACAAGTGGGGGTGTTT

20

GGGCTACTGCTTAGGGGATCCTCCTGNGGCCTTCTTTCTNCTTCTGGGGGTGTTT
TCTTCTTGNATTTACNNGGGGGGGGTTTATAGGCTTC

25 SEQ ID NO: 533

>17191 BLOOD 445041.11 X15480 g31947 Human mRNA for anionic glutathione S-
transferase (GST-pi-1). 0

GCCGCAGTCTTCGCCACCAGTGATGCCGCCCTACACCGTGGTCTATTTCCCAGTT
CGAGGCCGCTGCGCGGCCCTGGCGCATGCTGCTGGCAGATCAGGGCCAGAGCTG
30 GAAGGAGGAGGTGGTGACCGTGGAGACGTGGCAGGAGGGCTCACTCAAAGCCTC
CTGCCTATACGGGCAGCTCCCAAGTTCCAGGACGGAGACCTCACCTGTACCAG
TCCAATACCATCCTGCGTCACCTGGGCCGCACCCTTGGGCTCTATGGGAAGGACC
AGCAGGAGGCAGCCCTGGTGGACATGGTGAATGACGGCGTGGAGGACCTCCGCT
GCAAATACATCTCCCTCATCTACACCAACTATGAGGCGGGCAAGGATGACTATGT
35 GAAGGCACTGCCCGGGCAACTGAAGCCTTTTGAGACCCTGCTGTCCAGAACCA
GGGAGGCAAGACCTTCATTGTGGGAGACCAGATCTCCTTCGCTGACTACAACCTG
CTGGACTTGCTGCTGATCCATGAGGTCCTAGCCCCTGGCTGCCTGGATGCGTTCC
CCCTGCCCGCCTCATAGTTGGTGTAGATGAGGGAGATGTATTTGCAGCGGAGGTC
CTCCACGCCGTCA

40

SEQ ID NO: 534

>17309 BLOOD 994439.4 S78569 g1042081 laminin alpha 4 chain [Human, fetal lung,
mRNA, 6204 nt]. 0

CAAAGTGAATCCTGCTTTAATTCAAGCTTGTGGAGAACAAAGTCCTACAGAAACA
45 TTCCACAGAATTTTCTGGAAGAGAGGATCACAACAACCCTGTAAAAAGGTGAG
AAGGAAGCCAGGACAGCGCAGTCCCCAGTCCCGAACGGCCAGGGAGAGGAGGT
GGCCTAGCGCTGGCGGGGCTCACCCCAATCCGTCTGCCTTTTGATGCCGTACTCT
GCTGGTTGGCGCAGCCACCTCGGGATACTGCACACGGAGAGGAGGGAAAATAAG
CGAGGCACCGCCGCACCACGCGGGAGACCTACGGAGACCCACAGCGCCCGAGCC

CTGGAAGAGCACTACTGGATGTCAGCGGAGAAATGGCTTTGAGCTCAGCCTGGC
GCTCGGTTCTGCCTCTGTGGCTCCTCTGGAGCGCTGCCTGCTCCCGCGCCGCGTCC
GGGGACGACAACGCTTTTCCCTTTTGACATTGAAGGGAGCTCAGCGGTTGGCAGGC
AAGACCCGCTGAGACGAGCGAACCCCGCGTGGCTCTGGGACGCCTGCCGCTG
5 CGGCCGAGAAATGCAATGCTGGATTCTTTCACACCCTGTCGGGAGAATGTGTGCC
CTGCGACTGTAATGGCAATTCCAACGAGTGTTTGGACGGCTCAGGATACTGTGNN
AGANGGGCTTCATCCGTCCAGCAAGAACTCAGACAAATTTAACCCAGCCTACA
AGCAGCCCTGCCAGATTGTTTATGGNNTAGTTTCATGGTAGTTGGCACTGCCAGC
GGAACACAACAGGAGAGCACTGTGAAAAGTGTCTGGATGGTTATATCGGAGATT
10 CCATCAGGGGAGCACCCCAATTCTGCCAGCCGTGCCCCTGTCCCCTGCCCCACTT
GGCCAATTTTGCAGAATCCTGCTATAGGAAAAATGGAGCTGTTTCGGTGCATTTGT
AACGAAAATTATGCTGGACCTAACTGTGAAAGATGTGCTCCCGGTTACTATGGAA
ACCCCTTACTCATTGGAAGCACCTGTAAGAAATGTGACTGCAGTGGAAATTCAGA
TCCCAACCTGATCTTTGAAGATTGTGATGAAGTCACTGGCCAGTGTAGGAATTGC
15 TTACGCAACACCACCGGATTCAAGTGTGAACGTTGCGCTCCTGGCTACTATGGGG
ACGCCAGGATAGCCAAGAACTGTGCAGTGTGCAACTGCGGGGGAGGCCCATGTG
ACAGTGTAACCGGAGAATGCTTGGAAGAAGGTTTTGAACCCCTACAGGCTGTG
ATAAGTGCCTCTGGGACCTGACTGATGACCTGCGGTTAGCAGCGCTCTCCATCGA
GGAAGGCAAATCCGGGGTGCTGAGCGTATCCTCTGGGGCCGCGCTCATAGGCA
20 CGTGAATGAAATCAACGCCACCATCTACCTCCTCAAAACAAATTTGTCAGAAAG
AGAAAACCAATACGCCCTAAGAAAGATACAAATCAACAATGCTGAGAACACGAT
GAAAAGCCTTCTGTCTGACGTAGAGGAATTAGTTGAAAAGGAAAATCAAGCCTC
CAGAAAAGGACAACCTTGTTTCAGAAAGGAAAGCATGGACACCATTAACACGCAAG
TCAGCTGGTAGAGCAAGCCCATGATATGAGGGATAAAATCCAAGAGATCAACAA
25 CAAGATGCTCTATTATGGGGAAGAGCATGAACTTAGCCCCAAGGAAATCTCTGA
GAAGCTGGTGTGGGCCAGAAAGATGCTTGAAGAGATTAGAAGCCGTCAACCATT
TTTACCCCAACGGGAGCTCGTGGATGAGGAGGCAGATGAGGCTTACGAACCTACT
GAGCCAGGCTGAGAGCTGGCAGCGGCTGCACAATGAGACCCGCACTCTGTTTCC
TGTCGTCCTGGAGCAGCTGGATGACTACAATGCTAAGTTGTCAGATCTCCAGGAA
30 GCACTTGACCAGGCCCTTAACCTATGTGAGGGATGCCGAAGACATGAACAGGGCC
ACAGCAGCCAGGCAGCGGGACCATGAGAAACAACAGGAAAGAGTGAGGGAACA
AATGGAAGTGGTGAACATGTCTCTGAGCACATCTGCGGACTCTCTGACAACACCT
CGTCTAACTCTTTCAGAACTTGATGATATAATAAAGAATGCGTCAGGGATTTATG
CAGAAATAGATGGAGCCAAAAGTGAAGTACAAGTAAACTATCTAACCTAAGTA
35 ACCTCAGCCATGATTTAGTCCAAGAAGCTATTGACCATGCACAGGACCTTCAACA
AGAAGCTAATGAATTGAGCAGGAAGTTGCACAGTTCAGATATGAACGGGCTGGT
ACAGAAGGCTTTGGATGCATCAAATGTCTATGAAAATATTGTTAATTATGTTAGT
GAAGCCAATGAAACAGCAGAATTTGCTTTGAACACCACTGACCGAATTTATGAT
GCGGTGAGTGGGATTGATACTCAAATCATTTACCATAAAGATGAAAGTGAGAAC
40 CTCCTCAATCAAGCCAGAGAACTGCAAGCAAAGGCAGAGTCTAGCAGTGATGAA
GCAGTGGCTGACACTAGCAGGCGTGTGGGTGGAGCCCTAGCAAGGAAAAGTGCC
CTTAAAACCAAGACTCAGTGATGCCGTTAAGCAACTACAAGCAGCAGAGAGAGGG
GATGCCCAGCAGCGCCTGGGGCAGTCTAGACTGATCACCGAGGAAGCCAACAGG
ACGACGATGGAGGTGCAGCAGGCCACTGCCCCCATGGCCAACAATCTAACCAAC
45 TGGTCACAGAATCTTCAACATTTTGACTCTTCTGCTTACAACACTGCAGTGAACCTC
TGCTAGGGATGCAGTAAGAAATCTGACCGAGGTTGTCCCTCAGCTCCTGGATCAG
CTTCGTACGGTTGAGCAGAAGCGACCTGCAAGCAACGTTTCTGCCAGCATCCAGA
GGATCCGAGAGCTCATTGCTCAGACCAGAAGTGTTGCCAGCAAGATCCAAGTCT
CCATGATGTTTGTATGGCCAGTCAGCTGTGGAAGTGCACCTCGAGAACCAGTATGG

ATGACTTAAAGGCCTTCACGTCTCTGAGCCTGTACATGAAACCCCCTGTGAAGCG
GCCGGAAGTGAACGAGACTGCAGATCAGTTTATCCTGTACCTCGGAAGCAAAAA
CGCCAAAAAAGAGTATATGGGTCTTGCAATCAAAAATGATAATCTGGTATACGT
CTATAATTTGGGAAGTAAAGATGTGGAGATTCCCCTGGACTCCAAGCCCGTCAGT
5 TCCTGGCCTGCTTACTTCAGCATTGTCAAGATTGAAAGGGTGGGAAAACATGGAA
AGGTGTTTTTAACAGTCCCGAGTCTAAGTAGCACAGCAGAGGAAAAGTTCATTA
AAAAGGGGGAATTTTCGGGAGATGACTCTCTGCTGGACCTGGACCCTGAGGACA
CAGTGTTTTATGTTGGTGGAGTGCCTTCCAACCTTCAAGCTCCCTACCAGCTTAAAC
CTGCCTGGCTTTGTTGGCTGCCTGGAAGTGGCCACTTTGAATAATGATGTGATCA
10 GCTTGTACAACCTTAAAGCACATCTATAATATGGACCCCTCCACATCAGTGCCATG
TGCCCGAGATAAGCTGGCCTTCACTCAGAGTCGGGCTGCCAGTACTTCTTCGAT
GGCTCCGGTTATGCCGTGGTGAGAGACATCACAAGGAGAGGGAAATTTGGTCAG
GTGACTCGCTTTGACATAGAAGTTCGAACACCAGCTGACAACGGCCTTATTCTCC
TGATGGTCAATGGAAGTATGTTTTTCAGACTGGAAATGCGCAATGGTTACCTACA
15 TGTGTTCTATGATTTTGGATTTCAGCAGTGGCCCTGTGCATCTTGAAGATACGTTAA
AGAAAGCTCAAATTAATGATGCAAAATACCATGAGATCTCAATCATTACCACA
ATGATAAGAAAATGATCTTGGTAGTTGACAGAAGGCATGTCAAGAGCATGGATA
ATGAAAAGATGAAAATACCTTTTACAGATATATACATTGGAGGAGCTCCTCCAG
AAATCTTACAATCCAGGGCCCTCAGAGCACACCTTCCCCTAGATATCAACTTCAG
20 AGGATGCATGAAGGGCTTCCAGTTCCAAAAGAAGGACTTCAATTTACTGGAGCA
GACAGAAACCCTGGGAGTTGGTTATGGATGCCCAGAAGACTCACTTATATCTCGC
AGAGCATATTTCAATGGAGAGAGCTTCATTGCTTCAATTCAGAAAATATCTTTCT
TTGATGGCTTTGAAGGAGGTTTAAATTTCCGAACATTACAACCAAATGGGTTACT
ATTCTATTATGCTTCAGGGTCAGACGTGTTCTCCATCTCACTGGATAATGGTACTG
25 TCATCATGGATGTAAAGGGAATCAAAGTTCAGTCAGTAGATAAGCAGTACAATG
ATGGGCTGTCCCACTTCGTCATTAGCTCTGTCTCACCCACAAGATATGAACTGAT
AGTAGATAAAAGCAGAGTTGGGAGTAAGAATCCTACCAAAGGGAAAATAGAAC
AGACACAAGCAAGTGAAAAGAAGTTTTACTTCGGTGGCTCACCAATCAGTGCTC
AGTATGCTAATTTCACTGGCTGCATAAGTAATGCCTACTTTACCAGGGTGGATAG
30 AGATGTGGAGGTTGAAGATTTCCAACGGTATACTGAAAAGGTCCACACTTCTCTT
TATGAGTGTCCCATTTGAGTCTTCACCATTGTTTCTCCTCCATAAAAAAGGAAAAA
ATTTATCCAAGCCTAAAGCAAGTCAGAATAAAAAGGGAGGGGAAAAGTAAAGAT
GCACCTTCATGGGATCCTGTTGCTCTGAAACTCCCAGAGCGGAATACTCCAAGAA
ACTCTCATTGCCACCTTTCCAACAGCCCTAGAGCAATAGAGCACGCCTATCAATA
35 TGGAGGAACAGCCAACAGCCGCCAAGAGTTTGAACACTTAAAAGGAGATTTTGG
TGCCAAATCTCAGTTTTCCATTCTGCTCTGAGAACTCGTTCCTCCCATGGCATGATCT
TCTATGTCTCAGATCAAGAAGAGAATGACTTCATGACTCTATTTTTGGCCCATGG
CCGCTTGGTTTACATGTTTAATGTTGGTCACAAAAAACTGAAGATTAGAAGCCAG
GAGAAATACAATGATGGCCTGTGGCATGATGTGATATTTATTCGAGAAAGGAGC
40 AGTGGCCGACTGGTAATTGATGGTCTCCGAGTCCTAGAAGAAAGTCTTCCTCCTA
CTGAAGCTACCTGGAAAATCAAGGGTCCCATTATTTGGGAGGTGTGGCTCCTGG
AAAGGCTGTGAAAAATGTTTCAGATTAACCTCCATCTACAGTTTTAGTGGCTGTCTC
AGCAATCTCCAGCTCAATGGGGCCTCCATCACCTCTGCTTCTCAGACATTCAGTG
TGACCCCTTGCTTTGAAGGCCCCATGGAAACAGGAACTTACTTTTCAACAGAAGG
45 AGGATACGTGGTTCTAGATGAATCTTTCAATATTGGATTGAAGTTTGAAATTGCA
TTTGAAGTCCGTCCCAGAAGCAGTTCGGGAACCCTGGTCCACGGCCACAGTGTCA
ATGGGGAGTACCTAAATGTTTCACATGAAAAATGGACAGGTCATAGTGAAAGTCA
ATAATGGCATCAGAGATTTTTCACCTCAGTAACACCCAAGCAGAGTCTCTGTGA
TGGCAGATGGCACAGAATTACAGTTATTAGAGATTCTAATGTGGTTCAGTTGGAT

GTGGACTCTGAAGTGAACCATGTGGTTGGACCCCTGAATCCAAAACCAATTGATC
ACAGGGAGCCTGTGTTTGTGGAGGTGTTCCAGAATCTCTACTGACACCACGCTT
GGCCCCCAGCAAACCCCTTCACAGGCTGCATACGCCACTTTGTGATTGATGGACAC
CCAGTGAGCTTCAGTAAAGCAGCCCTGGTCAGCGGCGCCGTAAGCATCAACTCCT
5 GTCCAGCAGCCTGACATGACAGAGCACAGCTGCCCAAATACAAAGTTCTTTAGA
GCACTGAAAGAAACACAAAGCCAGCCAGGAGGAACAGTAACTCTTCCTTCGGGT
GGAAGCTTTCATCGAGTTGAACAGGACTTAAACGAATCATCAGGGACCGGATAT
TTCTTATTTCTCATTTGGATTCTTAACCTTGAATCCAAAGTGTCTGCAATGGACAA
CAATTGAAGGAGTGGCAAACCTTACTTGTATTGAGAGCACACGCAATTCCTACTGG
10 TGAAATTACTGTTTCTGTTTCTAATAAAATAGAAGGGATTCCAAATAAACACTTG
CACACATTTTGAAGTGC GGCTAGATTCTCAGATTCACCTTTCTTCCAGGGAAGA
TAACTTTCATCTATATAAAAATCTCTGTCCTAAACTACCTTTCTTTATTTTGAA
GAGACTTACTAACTTACATATAATCTAAATTAGATGATAGATTTGTTTTTAGCCCT
TTTGTTTGGTCTATCAGTATAAGAAGAATATTTTAGGTTTATAGCTGAAGTTATCA
15 AGGTTTAATAAAGTAAATTTCTAACAGAATACTAGAAAAATGCAGTATAATTTAA
TTTTTTCTAAATAAGAAACACAGGAAATCAACTACTTTTTCCCCTTCCTTATCTCC
TAAAAAGAAAAATAAAATTGTACATGAGAGGAGGCTTCTGTAGGTTATTATTACC
ATTATTGTGTGTTCTATGGGAATCATTGAGGATATCACAGCAAAAACAGTAGGAC
AAAATCATAAAATTCAATTTAAGAGTACACAAGTCCTTTATAANAGTTTGCTCCT
20 AGCCTGGGGCAACATAATGAGATCCCATCTCTGC

SEQ ID: NO: 535
17456: BLOOD 245885.4: AJ000517 g2370154 Human mRNA for spinocerebellar ataxia 7

25 AGTCAGCCACCGAATTGCTTTTATCAGTGTTAAAGTGGTCTGAACTGCTTGCTAC
CAATCTGTGAGAAGTTTTTGTGTTTTGTTTTGTTTTTAACTTGCAGTATATCACAG
AGCCACTCTTCAAGTAGATTGGCTGGGCAAAAGAATGTTTTGGCAAGAGCGTTAC
TG TAGACCTTTCTCCCTCCTTCCTTTTACTACCATTTTTTTTTTAACACTGTCATCTG
TAGGTCACTCTCCAGCAGTTAGGCACCTTAACTGGAGACCAGAAACCTTCCAGAG
30 AACACAGGGCTGCATCCCGAGCAACCCTCTGAAGAAGGGAATTAGGCTTTAGAT
TTTGATAGCAATGTTCCAGGAATGAAATATAGATGTTAGCCCAAGACACCATGAC
AAAATAGCCCAGCCTTTTGAGAGTAATTTGGGAAAAGAAGCTGTCAGAAGTTTCT
AACTTACAACTGGTTTGAAATTTTTGATGCCCAGACAGCAAGTATAAATCATTT
TGGAGGCTTACTTTTCATGATACAAAAGCAATTCTGTGTGANNNNNNNNNNNNNN
35 NNNNNNNNNNNNNATGCAAGCTAGTTTTGAGAAAGGAAGGCCAAATTGGGTGCGG
GGAGGGTGGGAGTGAGGAAGTTAAAATCACTATAGGGAGAAAAAACTTTTTTCA
AGATTTCCAAAGAGATGAAATTTTCTTAATCCTTTTAAGTTTTTCATAGTAAACAGT
ATGGCAGATTGGGTTGGTTGTCCTACCTGGTCTATTTTTAAAAGTCACCTTTTAAA
GTGACATTATTAGATACTTAAATGTTTCCAAGGCACTCTCTACATTACCCTTGT
40 TTTTCTCTTTGGATACTGTCCTGGGACTAAGTGTAGATTTCTGCTTCAAGCACTTC
TGGCATTGTGTGTTTTTGTATGCACTCCCTTCATGCCACTTCAGATGTTTATTTG
GATGTGGTTGGGGACGAGAGCAGACACCAAGGAAAGGGAGTTGGAGAGAATGT
AAGTCCTGACCTGAAGGTCTTTTGTGATGCATGTATAGGATTGCCCTGACACACA
CCCTCCTTTCTTGGGATTATACCAGCCATCTTCCTGAGAGTTTTTGGAGCCCTCTAG
45 GATATTTTTCTAGTACCCACCCCCCACCCTAAAGAAAGACCTTAATATGTTA
AAACAGCATTGCTTGGAGAAGGTGTCATTGAATTCCGGGACGAGCCGGAGCCTT
TAAATGGGTGCTTCCACCACTACAGGCTCCTGACACGAGTAACAGGCACTGTTGC
TTAGAAGAACACACGAAGTTGCCGAACACAGGGTAAAATTTCCAAGGCGCTGAT
CGTTGCCCTGGCCAGGGCCTGATGAGAGCCAGTCAGTACATTCTTTTTTTCCTAC

AGTTCTTGGGTTTCAAACCTTCAGTTTCAGGGAATTTCAAGTCAACAACAGGTAGA
ATGAATAAACTTGGTTACCAGCCTAATAATGTGAATTGCTACAGAATTATTCTTA
TTATGTAAGAAAACAAAACTTTATGCAGATACTTTAGCTATAAATTGATGTAAA
ATACTGATTTTTTTTAAAGGAAGGAGAGAACAGTATCTTGTTCAATTATTATGCAA
5 TCAATCAGTAAATGTTTTTAAAATGATACTACAGGAGAGCTTAGTAAGGAGAGG
GCATGGATGGGCCAGTTTGGCATAGTTGGGAGAAATCAGTCTGGTTTCCATCCCA
GTCGGGGAAGAGAGAGGTGAGAGGGAATCAGAACGTACCTAGTTGATTCCTTGG
TGACAAGTGCAATGGGGTATGGGTAGAATTTATTTTCAGAGCCAAGAGGACTTG
ATGGTTATAAATAAAGTTGCCTTTAGCAATGGAATTTACAGATCGATCATGTTGT
10 TCCGAAAGATGTGAATAGGATCCACAATAACAAGTTGATTCAGACTAATGTAGA
TATTTAGATTAGCAAGTATTGAACATTTGATTTCTTAGACTGAGGTTTTAAATGA
ATTCATTATTTCTCCCGGTAATACACAGAGCATCGGGATTAGGAAATTAGCCAT
TTTGGATTCTGTCTGCCACAAACAGACCTATTCTAAACAGTGCTATTAAATTTAG
ACTGTTGTTCAAATATTTTATTTTCTCCTAAACTACTTTTTATGGTGATGAATAAT
15 TAAGACCATTTAAAACACGGGAGTACAAGTATTTTTTTGAATTAAATTAAGTGC
AAAAACCAAATTTGCAGTGGTTGGGTTGTTTCTAGACAGACTTTGGTATCAATTT
AAAACCAAGATAATTTTTATATTCTTTCCAATAGAATTCATGACAACCTCCTGCA
GTTTTCTTAACCTAC

20 SEQ ID NO: 536

>17486 BLOOD gi|836069|gb|R64190.1|R64190 yi18b07.r1 Soares placenta Nb2HP Homo
sapiens cDNA clone IMAGE:139573 5', mRNA sequence

GCTCAAATGCCCGGAATGCAGAGCTCCGGCTGCGATGGGGCCAAATCGTGCTTA
AGAACGACCACCAGGAAGATTTCTGGAAAGTGAAGGAGTTCCTGCATAAGCAGG
25 GGAAGCAGAAGTATACACTTCCGCTCTACCACGCAATGATGGGTGGCAGTGAGG
TGGCCCAGACCCTCGCCAAGGAGACTTTTGCATCCACCGCCTCCAGCTCCACAG
CAATGTTGTCAACTATGTCCAGCAGATCGTGGCACCCAAGGGCAGTTAGAGGCTC
GTGTGCATGGCCCCTGNCTCTTTCAGGCTCTCCAGGGTTTCAGAATAATTGTTTGT
TCCCAAATTCCTGTTTCCCTGATCAATTTCTGAGGTTTATATTCCCTTCAGG

30

SEQ ID NO: 537

>17501 BLOOD Hs.12342 gnl|UG|Hs#S998603 Homo sapiens clone 24538 mRNA sequence
/cds=UNKNOWN /gb=AF055030 /gi=3005760 /ug=Hs.12342 /len=1725

GTTTGCTGTGAACCTTGCTACTTGTACTTGGTTGAAGTTCTAGGTACCTTTAGTCA
35 AGGGATGGAAAAATAAAGCCATACGCAGTTTTGTTACCTCAGTTACCCCAAAAA
TAGGAAAAGCAGCAAGCACAGTATTTTAAAGATCATAATTCCTATAAAAGGACT
GTGCACAAAGTGTTTAGACTCCATTTTCATTAGGCAGGTTGACTAAAAATGATTG
CAGTAACAGGTTTATATAAAATAGAGCAACCTTTCATGCTGTGACACAAATCAAA
AGGTTGATAACTTTGTAATTTTACTCTGGAGATTCTAACCGAAGTTGGTGTAAGT
40 TTTCAAGAGTTACTAAAATCAAGTTGGAAATGATTTACGTACACTTCCCTGAGCC
TGGACTAAAGCCTCATGCCTGTACCCCAAGTAGGTGATGGTACTTTTCTATACAA
AAAGGATTTCTTGGCAGGCAGGTATTTACAAAGTTTGTTCCTGTACCAGTCCAAT
AATGACAACCTCTAAATCCAGCTGCACCAAATCTTAGTGGGCCATTTGTCATACCT
ATGAAAATTCTTCAGTTATTAATAACTTTGTCAGTGCTACCTATGGTAGGCCGG
45 AAACAATGTAGATTAGGAAGTTTCATGAAAATTAAGTTTGGGGCTATGGAGAA
ACAGTTAAGTATCTTAAGTTACTAAACATTTCCACTGAATTTTTGGAGTGAGCCA
AGGTTACTATAAAATACTTTGGAAGATGAATTTCTTACCTGGAGTTAGTTTCGAG
AGTAAGCGTAGCTTTTAACAGAAATAACTGCAGATTTTAAGCTCATAATTTGCAA
AAAAAATCTTTTATTGGCATGAAAATAATGTTGTAATGGCACCAAATATTCCAC

TTAATGCATATACAGTATTAGAGTCAAAAACCTATTTTATCCCTCTTTGCTGTTTT
 TCCCCCTTCTGCCCCTTTCCTGGGTGTTGGGGGGGCCCCGCTGACAACAGTCACA
 AATCCAGCGACCTAGGAAAAAAATTGTTAATATAGAATGAAAAATTATCTTTAC
 AGGACTGAATTTTAAGCCCCTCTAAACTCTTCTGCCTTAGCTATCACTAATGATAT
 5 TCCTCTCTGGATTTTGTGGTGAGAAGGGCACTATGAGTTCCTTAATTTAAGGAAA
 AAATGTAACTTAATCAATGTAATCAATGCCATGCAAAATTCATTGCAAGTCAAG
 GGGGATGGGAGAGATGCAATGCCATACGGTGATACGGACCTTTAAGAAAGTACA
 ATCTTTCCTGAAATTCAAACACTATCATACTTCAAAAGGTCAAAACCCATTCCGG
 AATTTGGCTTTTTTAAGACTTTTTCTCTCCTGCTCACTGGCAGCTGTGTGTCTTAA
 10 CAGCATTCTTTCAAGTCCTGGTGTACTCTGCTGACAGCACTTTAAACTTTAACA
 GCACAATGATACTTGTACTACATACTTGATCTGAATTACTACAGAAAAATAATT
 ATGTTGCTTGCTTAATGATTCCCAGGAACTTCGTTGTAGGCATATATTTTATAAG
 AGTATTATACAGTGTTAACTATGCAAGTAAGTTCTAAAATTACACAATTATCTGT
 GTAATGTTTTAGTCCAATTACTGTGATTTATTCAACTCTGTTCTAAAGTTATCTGG
 15 AATTGTCATGCTGCCTCAATTTACAGAAATCTATAATAGATTCTATAGAAATGT
 AAAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 538

>17504 BLOOD 238178.2 Incyte Unique

20 CTGACAAAATGATCTCAATATTGGTGTAATAACCTCCCCTTTCAAGGGTCTTC
 CAAAGCACTTCCTGTCTGCGGCATACAAAATGTATGGCACGGAATTTTAAGCTTA
 CTGAGCTTTATAAACACGTCACATTCACACATTCAAGACACACACTGGATATTCCG
 GATAAAAACAAACAAACAAAACAGGGCTAAATACCCATTCCCCTCAATAACTT
 GGATAAGATACCTAAAAAAGGTGACCTTCGGTACCTTTCTGTCTTCTCCCTCTC
 25 GCTATTTGCCTACACTGGCTTCCTCACCTCCACTTTTTCTCACGTTTATCTGAGCG
 AAAACAAGCACGGTTCGGCAGCCTCCTTTCCCAGCCCTACCTTTGTGCTGCAAAA
 GCGAAAATTCAAAGCCAAGTACAATAGGAGACCGCCACCCTGGCTCCCTCGT
 GACACGAGGGAGCGCGAAGCGGAGGGCGCCTCGCGGCAGGAGCGGGATTTCG
 GGGTCACGGGAACCGGCAGGGGAACGGGATAAAGTTCCCGGAGAAAGGAAAGG
 30 AGAGCGTGGGATAGTAAAAGAGAAGACGCGGAGAAGAGGAGAGGACCTACAAG
 AACGGAGGACAGGGGCGCACGATGGTCCCGGGGGAGCGGAAACAAAGGCACG
 CAAAACGGAAAAGCGTGTGTAGGGGAGCGGAAAAGGAAGTCACCACCGTGGCC
 TGCACGAAATGGCGAAAAGTCTTTTGAAGACAGCCTCTCTGTCTGGAAGGACA
 AAATTGCTACATCAAACAGGATTGTCACTTTATAGTACATCCCATTGGATTTTATG
 35 AGGAAGAAGTGAAAAAAACACTTCAGCAGTTTCTTGGTGGATCCATTGACCTTC
 AGAAGGAAGACAATGGCATTGGCATTCTTACTCTGAACAATCCAAGTAGAATGA
 ATGCCTTTTTCAGGTGTTATGATGCTACAACCTTCTGGAAAAAGTAATTGAATTGGA
 AAATTGGACAGAGGGGAAAGGCCTCATTGTCCGTGGGGCAAAAAATACTTTCTC
 TTCAGGATCTGATCTGAATGCTGTGAAATCACTAGGAACTCCAGAGGATGGAAT
 40 GGCCGTATGCATGTTTCATGCAAAACACCTTAACAAGATTTATGAGACTTCCTTTA
 ATAAGTGTTGCGCTGGTTCAAGGTTGGGCATTGGGTGGAGGAGCAGAATTTACTA
 CAGCATGTGATTTCAAGTTAATGACTCCAGAGAGTAAGATCAGATTTCGTCCACAA
 AGAGATGGGCATAATACCAAGCTGGGGTGGCACCACCCGGCTAGTTGAAATAAT
 CGGAAGTAGACAAGCTCTCAAAGTGTTGAGTGGGGCCCTTAAACTGGATTCAA
 45 AAATGCTCTAAACATAGGAATGGTTGAAGAGGTCTTGCAGTCTTCAGATGAAACT
 AAATCTCTAGAAGAGGCACAAGAATGGCTAAAGCAATTCATCCAAGGGCCACCG
 GAAGTAATTAGAGCTTTGAAAAAATCTGTTTGTTCAGGCAGAGAGCTATATTTGG
 AGGAAGCATTACAGAACGAAAGAGATCTTTTAGGAACAGTTTGGGGTGGGCCTG
 CAAATTTAGAGGCTATTGCTAAGAAAGGAAAATTTAATAAATAATTGGTTTTTCG

TGTGGATGTACTCCAAGTAAAGCTCCAGTGACTAATATGTATAAATGTTAAATGA
 TATTAAATATGAACATCAGAATTACTTTGAAGGCTACTATTAATATGCAGACTTA
 CTTTTAATCATTTGAATATCTGAACTCATTTACCTCATTTCTTGCCAATTACTCACT
 TGGGTATTTACTGCGTAATCTGGAACATTTAGCTAAAATATACACTTTTGGCTTA
 5 AAAATTATTGCTGTCAATTCCAATAATAATTCTTAGCTTATAACCAAAGAGCAGT
 GTTTAAAAGGAGAGCTTCTATACAAAACCTATTCTTGGCGTTACTTTTCATACAA
 TTTTTGTTCTGTTTTACCTGGAAATAATTTACCAAATAAAGTGGTGTGCTGCTA
 AAGAACAAAAGTGGGGAGGTATCAGGGAACAAGAAAACAAGAAAGGGTATGAT
 CAATCATTTTCTTCTGCTCCAAACAGCTGGAGTAAAATTCATGGGAAATGGCCCT
 10 TCATTTAAAAAAAGATGTACCTCACTACCCACTACAAATTTGGAAGTTTGTCTTT
 TCAATAATTAGTTTTCTATTGTAAATTACCTACTAAACAGTGGTAGCCATGACAT
 GGAAAGTCAACTGATTCTACAATTGGACATTCATTTGTGTGCCCTGGAATTTCCA
 ACTAGTAATAAACAACACTACTGTTGATGTAGTTTTAAACCACTTGAAGGGACTCAT
 GAAGCATCCTGCAACATAAATTTGCATTTTACATCAGATTTCTTTTTTTTCTCTGA
 15 AAAACAACCTAACCCTTCTAACAACCTATCTTTCAAAAGTAAATGTAATAAAAATGCA
 CAACATAAAATGTTTATGATCCCAGCAATACACTTTTTTAAAAAATGTGAAAGTCA
 AAGAATTAAGTTCTAGTTCTGACTCATCACAAGAGGTCAAAAGTATTTGCTACTG
 TAACATTCAATTCACATTTGAGAATCATGGTAAAAATAACTTGCATTTGCCTTAC
 CATCATGATCCTACTGTTGAGTTAGGAAAATATGGTTAGACAGACTCACATTACT
 20 TTTTTTCAGAGGTAAACTCTAGATTACTGTGTCAACCCAATACTATTTGGCCATAG
 ATGTAAAAACTACCAAATAAAAGTGGATTTTGTGGTCTACAACATTTTGTGTAAA
 GTGAATTCATGTCTGCTAAGACCGTTAAGTCTGCC

SEQ ID NO: 539

25 >17616 BLOOD GB_R70598 gi|844115|gb|R70598|R70598 yi41g08.r1 Soares placenta
 Nb2HP Homo sapiens cDNA clone IMAGE:141854 5' similar to contains Alu repetitive
 element; mRNA sequence [Homo sapiens]
 GATCCACCCACCTCAGCCTCCCACAGTGCTGGGACTACAGGCATGAGGATCATCT
 GAGGCCAAGAGTTCAAGATCAGCCTGGGCAACATAGTGATACCCTATCTCTTAA
 30 AAAAGAAGAAGTTTTTAAATTTGAAATAATAATAGGTACTGGATTTATGCAAATG
 TCTTTTCTGCGTCTTTTGAGATGAGTATCAGGTTTTTTTTTTTCTCCTNTTATCATCTG
 ATGATGANCTTAATGTTTCCATTTGTATTAATGGGAATACTAAGTCCCTCTGTGAT
 TTTCTGAACCCAAGCTATTTCTTANGGCCTGAGTTTNNATTTTNGTTTGACACAGTA
 ATTAAAATTAGGANGGCCCAAGCCGTGGGTGGCCATGTTGNCCTGTAAGTCCCN
 35 AAGTTGNCTGANGGTAAGGAAGGATTTGCTTTGNAGCCCCA

SEQ ID NO: 540

>17691 BLOOD 327226.7 Incyte Unique

GCTTAAGAGACCCCGCAGTGGGGCGCTCGTCCGAAGCCAGGCCGCGTCCGCCAT
 40 AGTACCTGGCTTGGAGGTGTCGCCGCCGCTCGGTGAGAGCCCCGAGCGGCAGG
 GGGCCAACACAAAAAGGGAGCCGGAGAAGCCCTAGCCGCTGCCCAGCAGCTTGC
 GGGCGTGTTCTCGCGGTTCCGGGCCCTCAAGGCGACGGAAACGAAAGGCGAGCGA
 AGCGCGGAGGATCCGGCGAGAAGAAGCGTCAGGGAGCCTCGGCGGTGTCCCCGG
 GGTCCGCCGAAGCCACCCGGCCGGCTGGGGCCCCGGGTGGTGAGGAAGTGC
 45 TCCGAGGCCTCGCCGAGGCCTAGCGCCGGCTTTGTGTCCGAGGCGGCGGCTGGC
 GCGGGGGGAGGCTGGAGCCGGGGGCGTGCTGCGGGAAGGCCTCTCTCCGCCG
 ACCGCGCGTTTTTCGGCCTAGGCCGTGGGGCCGCTCGTGGCCTCCGGGGAGCAGG
 CGCCAGGGGTTTTGTAGTGCGGAGGGGGCCTGGGCCTGGGCCTGGGGAAGCTGAC
 GCCGGTCTGCCGAAGCCAGGAGGAGGCGTGAGGCCGCTCGTGGACTCCGGGCC

25 SEQ ID NO: 541
>17713 BLOOD GB_R78516 gi|854797|gb|R78516|R78516.yi73h02.r1 Soares placenta
Nb2HP Homo sapiens cDNA clone IMAGE:144915 3', mRNA sequence [Homo sapiens]
GTGCGTGTGATTACCAGAGAACTACTAAAAAACC AACTGCTTTTTAAATCCTAT
TGTGTAGTTAAAGTGTGCCTTGACCAATCTAATGAATTGATTAATTA ACTGG
30 GCCTTTATACTTAACTAAATAAAAACTAAGCAGATATGAGTTAAATTTAAAAAA
AAAAAAAAANAAG

>17805 BLOOD 099572.2 AF001862 g2232149 Human FYN binding protein mRNA, complete cds. 0

45 TGGCCTCCTGGAAACAAGCCATCTCTTCACAGTGTAAACCAAGACCATGACTTAA
AGCCACTAGGCCCGAAATCTGGGCCTACTCCTCCAACCTCAGAAAATGAACAGA
AGCAAGCGTTTCCCAAATTGACTGGGGTTAAAGGGAAATTTATGTCAGCATCACA
AGATCTTGAACCCAAGCCCCTCTTCCCCAAACCCGCCTTTGGCCAGAAGCCGCCC
CTAAGTACCGAGGAACTCCCATGAAGACGAAAGCCCCATGAAGAATGTGTCTTC

ATCAAAAGGGTCCCCAGCTCCCCTGGGAGTCAGGTCCAAAAGCGGCCCTTTAAA
ACCAGCAAGGGAAGACTCAGAAAATAAAGACCATGCAGGGGAGATTTCAAGTTT
GCCCTTTCTGAGTGGTTTTGAAACCTGCTGCGAGCAGGGGAGGCCTAGGTCTC
TCCAAAAATGGTGAAGAAAAAAGGAAGATAGGAAGATAGATGCTGCTAAGAA
5 CACCTTCCAGAGCAAAATAAATCAGGAAGAGTTGGCCTCAGGGACTCCTCCTGC
CAGGTTCCCTAAGGCCCTTCTAAGCTGACAGTGGGGGGGCCATGGGGCCAAAG
TCAGGAAAAGGAAAAGGGAGACAAGAATTCAGCCACCCCGAAACAGAAGCCAT
TGCTCCCTTGTTTACCTTGGGTCCACCTCCACCAAACCCAACAGACCACCAA
TGTTGACCTGACGAAATTCACAAAACCTCTTCTGGAAACAGTACTAGCAAAGG
10 GCCAGACGTCTTACTCAACAACTTCCCTGCCACCACCTCCACCATCCCATCCGGC
CAGCCAACCACCATTGCCAGCATCTCACCCATCACAACCACCAGTCCCAAGCCTA
CCTCCCAGAAACATTAAACCTCCGTTTGACCTAAAAAGCCCTGTCAATGAAGACA
ATCAAGATGGTGTACGCACTCTGATGGTGTCTGGAAATCTAGATGAGGAACAAG
ACAGTGAAGGAGAAACATATGAAGACATAGNNNNNNNNNNNNNNNNNNNNNN
15 NNN
NNAG
GCCCTATTCAAGTCATCCATCTTGCAAAGCTTGTTGTGATGTCAAAGGAGGAAA
GAATGAACTGAGCTTCAAGCAAGGAGAGCAAATTGAAATCATCCGCATCACAGA
CAACCCAGAAGGAAAATGGTTGGGCAGAACAGCAAGGGGTTTATATGGCTATAT
20 TAAAACAACTGCTGTAGAGATTGACTATGATTCTTTGAACTGAAAAAAGACTCT
CTTGGTGCCCTTCAAGACCTATTGAAGATGACCAAGAAGTATATGATGATGTTG
CAGAGCAGGATGATATTAGCAGCCACAGTCAGAGTGGAAAGTGGAGGGATATTCC
CTCCACCACCAGATGATGACATTTATGATGGGATTGAAGAGGAAGATGCTGATG
ATGGTTTCCCTGCTCCTCCTAAACAATTGGACATGGGAGATGAAGTTTACGATGA
25 TGTGGATACCTCTGATTTCCCTGTTTCATCAGCAGAGATGAGTCAAGGAACATA
TTTGGAAAAGCTAAGACAGAAGAAAAGGACCTTAAGAAGCTAAAAAAGCAGGA
AAAAGAAGAAAAAGACTTCAGGAAAAAATTTAAATATGATGGTGAAATTAGAGT
CCTATATTCAACTAAAGTTACAACCTCCATAACTTCTAAAAAGTGGGGAACCAGA
GATCTACAGGTAAAACCTGGTGAATCTCTAGAAGTTATACAAACCACAGATGAC
30 ACAAAGTTCTCTGCAGAAATGAAGAAGGGAAATATGGTTATGTCCTTCGGAGT
TACCTAGCGGACAATGATGGAGAGATCTATGATGATATTGCTGATGGCTGCATCT
ATGACAATGACTAGCACTCAACTTTGGTCATTCTGCTGTGTTTCATTAGGTGCCAA
TGTGAAGTCTGGATTTTAATTGGCATGTTATTGGGTATCAAGAAAATTAATGCAC
AAAACCACTTATTATCATTTGTTATGAAATCCCAATTATCTTTACAAAGTGTTTAA
35 AGTTTGAACATAGAAAATAATCTCTCTGCTTAATTGTTATCTCAGAAGACTACAT
TAGTGAGATGTAAGAATTATTAATATTCCATTTCCGCTTTGGCTACAATTATGA
AGAAGTTGAAGGTACTTCTTTTAGACCACCAGTAAATAATCCTCCTTCAAAAAAT
AAAAATAAAAGAAAAAGGAAAATCATTAGGAAGAAATGACCTGTCTAAAAAA
ACCTAAGGAAGAATAATAATAAGAAAGGAAATTTAAAAACATTCCACAAGAA
40 GAAAAATTATTGTTTATACTCCTACTTATGGTTATATCTTATATTCTCTATTCAAG
TGACCTGTCTTTTAAAAAGGCAGTGCTGTCTTACCTCTTGCTAGTGGGTAAATGT
TTTCAAAAATTATAGCAGTAGTAGAAGTTTGTATAAAATTTGTCCTTATTTGTTA
ATTGTATATAAATGTTAATTATTTGATACGAATGTTATGCATTTAGTATGCACATT
GAAGTCTAACTGTAGAAGAGTCTAAAACAAGTTCTCTTTTGCAGATTCACATA
45 CTAATGGTTTAATTCTGTGCTCTGTTTAAAGTACTATTATACTAGAGTAGATCTG
AATGAGGATAACCTAAAATCATGAGGAATGGAAGAATGGACCTTGAACTACC
TAGGCTTTTATGCATGGCACCTCTTTATAATGAAGACACTTTTAAAGTTTTTGT
TTTGTTCATTAACCGCTAGATTTTTTTTTCTCTTTTTTAAATCCATTTTACTGG
AAAGTTGGCCAGCAGAGGGAGTAGAAATTATTAATTTCTAGTGTTTGGATTGG

GCCCTTCTCTAACAGTACATACTCATTCCCAAAGCAATCCAAAAACAAAATGTGA
 ACCATTTGGGTTTCAAATGTTAAGAACACTAAATAGCATGATTTAAAAAATGAAA
 AATGCTAACACCCAAGAAAAGAAGATATTAAGTGCTTTTAAACAACTCCTAGAGT
 ACAAATGAGTACATCATAATGCTGGGCTCTTCTACTAATGAACCATCGAGTGAT
 5 ATTGAATAAATTATTTATCTTCTCAGTTTCCTTATCTGTAAATTACAATATTAGAC
 TAAGTAAGTTTTTCCAACCTCTTCACTACCAATTACCTTAGGCTTTTATAATGCTCC
 GCCTACTTCAGTCCCATGTTTCAGAAGCTTTTGTCTATTTTTTAAACTCATTGATT
 AAATAATGATTAATGCATTCTCCACATTTTAATATTGCAAAGGCCCATTTGGAGTT
 TCTGAAGTGGCTCCACAGAATTGAAATAATTTCAAATAACTGTAAAGGAACTGA
 10 AAATCTTCACAGAGATGAAGTGGGGTTTCCATTAGGTGCTTTGAAATTTGATAAC
 AAATCATCAACTTCCACTGGTCAATATATAGATTTTGGGTGTCTGAGGCCCAAG
 ATTAGATGCCACTAATCTCCAAAGATTCCTCCAATTATGAAATATTTTAATGTCT
 ACTTTTAGAGAGCACTAGCCAGTATATGACCATGTGATTAATTTCTTTTCACACTA
 GATAAAATTACCTGGTTCAAAAGTGGTTTTTGTATTATAAATTTGGTAATAAATAT
 15 ATATAATACACAGACAGGATAGTTTTTATGCTGAAGTTTTTGGCCAGCTTTAGTTT
 GAGGACTCCTTGATAAGCTTGCTAAACTTTCAGAGTGCCCTGAGACACTTCCAGC
 CATCCCTCCTCCTGCCTTCATTGGGGCAGACTTGCATTGCAGTCTGACAGTAATTT
 TTTTCTGATTGAGAATTATGTAAATTCAATACAATGTCAGTTTTTAAAAGTCAAA
 GTTAGATCAAGAGAATATTTTCAGAGTTTTGGTTTACACATCAAGAAACAGACACA
 20 CATACCTAGGAAAGATTTACACAATAGATAATCATCTTAATGTGAAAGATATTTG
 AAGTATTAATTTTAATATATTAATATGATTTCTGTTATAGTCTTCTGTATGGAAT
 TTTGTCACTTAAGATGAGCTGCAAATAAATAAATACCTTCAATGGAAAAA
 NNNNGNAAAAAAAAAANAAAAC
 25 SEQ ID NO: 543
 >17862 BLOOD 207683.2 M83751 g178990 Human arginine-rich protein (ARP) gene,
 complete cds. 0
 TCCTGCTGTAGTGCCTTCTGCGCCAGGCCCGGTTCAATCAGCGGCCACAACCTGTC
 TAGGGCTCAGACACCACCAGCCAATGAGGGAGGGCACGTGGAGCCGCGTCTGGG
 30 CTCGCGGCTCCTGACCAATGGGGAAGTGGCATGTGGGAGGGCGCCGGGGTTCCC
 CCCGCCAATGGGGAGCTACGGCGCGCGGGCCGGGACTTGGAGGCGGTGCGGCGCG
 GCGGGTGCGGTTTCAGTCGGTCGGCGGCGGCAGCGGAGGAGGAGGAGGAGGAGG
 AGGATGAGGAGGATGAGGAGGATGTGGGCCACGCAGGGGCTGGGCGGTGGCGC
 TGGCTCTGAGCGTGCTGCCGGGCAGCCGGGCGCTGCGGCCGGGCGACTGCGAAG
 35 TTTGTATTTCTTATCTGGGAAGATTTTACCAGGACCTCAAAGACAGAGATGTCAC
 ATTCTCACCAGCCACTATTGAAAACGAACTTATAAAGTTCTGCCGGGAAGCAAG
 AGGCAAAGAGAATCGGTTGTGCTACTATATCGGGGCCACAGATGATGCAGCCAC
 CAAAATCATCAATGAGGTATCAAAGCCTCTGGCCCACCACATCCCTGTGGAGAA
 GATCTGTGAGAAGCTTAAGAAGAAGGACAGCCAGATATGTGAGCTTAAGTATGA
 40 CAAGCAGATCGACCTGAGCACAGTGGACCTGAAGAAGCTCCGAGTTAAAGAGCT
 GAAGAAGATTCTGGATGACTGGGGGGAGACATGCAAAGGCTGTGCAGAAAAGTC
 TGACTACATCCGGAAGATAAATGAACTGATGCCTAAATATGCCCCCAAGGCAGC
 CAGTGCACGGACCGATTTGTAGTCTGCTCAATCTCTGTTGCACCTGAGGGGGAAA
 AAACAGTTCAACTGCTTACTCCCAAACAGCCTTTTTGTAAATTTATTTTTTAAGTG
 45 GGCTCCTGACAATACTGTATCAGATGTGAAGCCTGGAGCTTTCCTGATGATGCTG
 GCCCTACAGTACCCCCATGAGGGGATTCCCTTCCTTCTGTTGCTGGTGTACTCTAG
 GACTTCAAAGTGTGTCTGGGATTTTTTTTATTAAAGAAAAAAATTTCTAGCTGTC
 CTTGCAGAATTATAGTGAATACCAAATGGGGTTTTTGGCCCAGGAGGCTCCTACC
 AGTTTCTGCTTTCAGTTGCAGAGTTTGGGGGGTTATTCATTCCCATTATCTCTC

AACCCACCAGTGCTGAAAATACCAGAGCAGGACATAGGGGCTGGGGCCAGCTGA
TGTGTGTGGGTGTGTACCACTAGAGGGCAGCAGGCACTCAGCAGAAAGGAGGTG
GCGGGGGCGGGGGGTGCTGCGCTTGATACCCTGCCCTTGATACAGTATCTGTCT
TACCCGCCCAAGAGAGCTGGAGGCCACAGCTCTAGGAGGAT

5

SEQ ID NO: 544

>17898 BLOOD 064333.4 X03663 g29899 Human mRNA for c-fms proto-oncogene. 0

GGCTTCAGGAAGGGCAGACAGAGTGTCCAAAAGCGTGAGAGCACGAAGTGAGG
AGAAGGTGGAGAAGAGAGAAGAGGAAGAGGAAGAGGAAGAGAGGAAGCGGAG
10 GGAAGTGCAGGCTAAAAGGGGAAGAAGAGGATCAGCCCAAGGAGGAGGA
AGAGGAAAACAAGACAAACAGCCAGTGCAGAGGAGAGGAACGTGTGTCCAGTG
TCCCGATCCCTGCGGAGCTAGTAGCTGAGAGCTCTGTGCCCTGGGCACCTTGCA
CCCTGCACCTGCCTGCCACTTCCCCACCGAGGCCATGGGCCCAGGAGTTCTGCTG
CTCCTGCTGGTGGCCACAGCTTGGCATGGTCAGGGAATCCCAGTGATAGAGCCCA
15 GTGTCCCGAGCTGGTTCGTGAAGCCAGGAGCAACGGTGACCTTGCGATGTGTGG
GCAATGGCAGCGTGGAATGGGATGGCCCCCATCACCTCACTGGACCCTGTACTC
TGATGGCTCCAGCAGCATCCTCAGCACCAACAACGCTACCTTCCAAAACACGGG
GACCTATCGCTGCACTGAGCCTGGAGACCCCTGGGAGGCAGCGCCGCCATCCA
CCTCTATGTCAAAGACCCTGCCCGGCCCTGGAACGTGCTAGCACAGGAGGTGGTC
20 GTGTTTCGAGGACCAGGACGCACTACTGCCCTGTCTGCTCACAGACCCGGTGCTGG
AAGCAGGCGTCTCGCTGGTGCCTGTGCGTGGCCCGGCCCTCATGCGCCACACCAA
CTACTGCTTCTCGCCCTGGCATGGCTTCACCATCCACAGGGGCCAAGTTCATTTCAG
AGCCAGGACTATCAATGCAGTGCCCTGATGGGTGGCAGGAAGGTGATGTCCATG
AGCATCCGGCTGAAAGTGCAGAAAGTCATCCAGGGCCCCCAGCCTTGACACTG
25 GTGCCTGCAGAGCTGGTGCAGGATTCGAGGGGAGGCTGCCCAGATCGTGTGCTCA
GCCAGCAGCGTTGATGTAACTTTGATGTCTTCTCCAACACAACAACACTAAGC
TCGCAATCCCTCAACAATCTGACTTTCATAATAACCGTTACCAAAAAGTCCTGAC
CCTCAACCTCGATCAAGTAGATTTCCAACATGCCGGCAACTACTCCTGCGTGGCC
AGCAACGTGCAGGGCAAGCACTCCACCTCCATGTTCTTCCGGGTGGTAGAGAGT
30 GCCTACTTGAACCTTGAGCTCTGAGCAGAACCTCATCCAGGAGGTGACCGTGGGG
GAGGGGCTCAACCTCAAAGTCATGGTGGAGGCCTACCCAGGCCTGCAAGGTTTT
AACTGGACCTACCTGGGACCCTTTTCTGACCACCAGCCTGAGCCCAAGCTTGCTA
ATGCTACCACCAAGGACACATACAGGCACACCTTCACCCTCTCTCTGCCCCGCCT
GAAGCCCTCTGAGGCTGGCCGCTACTCCTTCTGGCCAGAAACCCAGGAGGCTG
35 GAGAGCTCTGACGTTTGAGCTCACCTTCGATACCCCCCAGAGGTAAGCGTCATA
TGGACATTCATCAACGGCTCTGGCACCCCTTTTGTGTGCTGCCTCTGGGTACCCCCA
GCCCAACGTGACATGGCTGCAGTGCAGTGGCCACACTGATAGGTGTGATGAGGC
CCAAGTGCTGCAGGTCTGGGATGACCCATAACCCTGAGGTCCTGAGCCAGGAGCC
CTTCCACAAGGTGACGGTGCAGAGCCTGCTGACTGTTGAGACCTTAGAGCACAA
40 CCAAACCTACGAGTGCAGGGCCCACAACAGCGTGGGGAGTGGCTCCTGGGCCTT
CATACCCATCTCTGCAGGAGCCCACACGCATCCCCCGGATGAGTTCCTCTTCACA
CCAGTGGTGGTCGCCTGCATGTCCATCATGGCCTTGCTGCTGCTGCTGCTCCTGCT
GCTATTGTACAAGTATAAGCAGAAGCCCAAGTACCAGGTCCGCTGGAAGATCAT
CGAGAGCTATGAGGGCAACAGTTATACTTTTCATCGACCCACGCAGCTGCCTTAC
45 AACGAGAAGTGGGAGTTCCCCCGGAACAACCTGCAGTTTGGTAAGACCCTCGGA
GCTGGAGCCTTTGGGAAGGTGGTGGAGGCCACGGCCTTTGGTCTGGGCAAGGAG
GATGCTGTCCTGAAGGTGGCTGTGAAGATGCTGAAGTCCACGGCCCATGCTGATG
AGAAGGAGGCCCTCATGTCCGAGCTGAAGATCATGAGCCACCTGGGCCAGCACG
AGAACATCGTCAACCTTCTGGGAGCCTGTACCATGGAGGCCCTGTACTGGTCAT

CACGGAGTACTGTTGCTATGGCGACCTGCTCAACTTTCTGCGAAGGAAGGCTGAG
 GCCATGCTGGGACCCAGCCTGAGCCCCGGCCAGGACCCCGAGGGAGGCGTCGAC
 TATAAGAACATCCACCTCGAGAAGAAATATGTCCGCAGGGACAGTGGCTTCTCC
 AGCCAGGGTGTGGACACCTATGTGGAGATGAGGCCTGTCTCCACTTCTTCAAATG
 5 ACTCCTTCTCTGAGCAAGACCTGGACAAGGAGGATGGACGGCCCCCTGGAGCTCC
 GGGACCTGCTTCACTTCTCCAGCCAAGTAGCCCAGGGCATGGCCTTCCTCGCTTC
 CAAGAATTGCATCCACCGGGACGTGGCAGCGCGTAACGTGCTGTTGACCAATGG
 TCATGTGGCCAAGATTGGGGACTTCGGGGCTGGCTAGGGACATCATGAATGACTCC
 AACTACATTGTCAAGGGCAATGCCCGCCTGCCTGTGAAGTGGATGGCCCCAGAG
 10 AGCATCTTTGACTGTGTCTACACGGTTCAGAGCGACGTCTGGTCCTATGGCATCC
 TCCTCTGGGAGATCTTCTCACTTGGGCTGAATCCCTACCCTGGCATCCTGGTGAA
 CAGCAAGTTCTATAAACTGGTGAAGGATGGATACCAAATGGCCCAGCCTGCATTT
 GCCCCAAAGAATATATACAGCATCATGCAGGCCTGCTGGGCCTTGGAGCCCACC
 CACAGACCCACCTTCCAGCAGATCTGCTCCTTCCTTCAGGAGCAGGCCCAAGAGG
 15 ACAGGAGAGAGCGGGACTATACCAATCTGCCGAGCAGCAGCAGAAGCGGTGGC
 AGCGGCAGCAGCAGCAGTGAAGTGGAGGAGGAGAGCTCTAGTGAGCACCTGACC
 TGCTGCGAGCAAGGGGATATCGCCAGCCCTTGCTGCAGCCCAACAACCTATCAGT
 TCTGCTGAGGAGTTGACGACAGGGAGTACCACTCTCCCCCTCCTCCAACTTCAAC
 TCCTCCATGGATGGGGCGACACGGGGAGAACATACAAACCTCTGCCTTCGGTCATT
 20 TCACTCAACAGCTCGGCCAGCTCTGAACTTGGGAAGGTGAGGGATTGAGGGG
 AGGTCAGAGGATCCCACTTCCTGAGCATGGGCCATCACTGCCAGTCAGGGGCTG
 GGGGCTGAGCCCTCACCCCCCGCCTCCCTACTGTTTCTCATGGTGTGGCCTCGTG
 TTTGCTATGCCAACTAGTAGAACCTTCTTTTCTTAATCCCCTTATCTTCATGGAAAT
 GGACTGACTTTATGCCTATGAAGTCCCCAGGAGCTACACTGATACTGAGAAAACC
 25 AGGCTCTTTGGGGCTAGACAGACTGGCAGAGAGTGAGATCTCCCTCTCTGAGAG
 GAGCAGCAGATGCTCACAGACCACACTCAGCTCAGGCCCTTGGAGCAGGATGG
 CTCCTCTAAGAATCTCACAGGACCTCTTAGTCTCTGCCCTATACGCCGCCTTCACT
 CCACAGCCTCACCCCTCCCACCCCCATACTGGTACTGCTGTAATGAGCCAAGTGG
 CAGCTAAAAGTTGGGGGTGTTCTGCCAGTCCCGTCATTCTGGGCTAGAAGGCAG
 30 GGGACCTTGGCATGTGGCTGGCCACACCAAGCAGGAAGCACAACTCCCCCAAG
 CTGACTCATCCTAACTAACAGTCACGCCGTGGGATGTCTCTGTCCACATTAACT
 AACAGCATTAAATGCAAAAAAAAAAAAAAAAAA

SEQ ID NO: 545

35 >17915 BLOOD GB_R93149 gi|967315|gb|R93149|R93149 yq15g08.s1 Soares fetal liver
 spleen 1NFLS Homo sapiens cDNA clone IMAGE:197054 3', mRNA sequence [Homo
 sapiens]
 CTATTTTCCACAAATCATTGGTTTATTAGAAAGTTCCTTTCCCTCATTTTACAGCA
 TATATATCTCTATCATATGTGATAAAGTTAAATACAATCTGTTATGCTTGTAAGTA
 40 AGGTTTATTTTATTTTACTTTTAAATCACTATTCTGGAAGTTAAAGAAAATGC
 CCTAGGGAAGGCAAAGAGGCAGCCAGAGTATGGCTCAATCTACAAGCTAATGG
 GGAAGCAGGCACGGAAAATGTTAATACTGTATTATTTATTTACATGGGGCTGAAA
 GCAAAGGAAAATGAGTCCCTTCACTTACACAGGNTGGATTTCATTTTCCCGGG
 C

45

SEQ ID NO: 546

>17952 BLOOD 337221.6 Incyte Unique

AAAAAAAAAAGAAAAAAGAAAAAAGAGAAAAAAGCGAAATAGGTTATATTTTAA
 AAACAATAGAAAGGCAATAAGTTGCGATAAGCTCTTACTATTGACCAAGGTTAT

35

45

45

TCCTTGGATCCCAGGCCAGTTCACAAATGATGCAGAGACAGAGTTAATGATGTC
 AAAGCTTCCACTGGAAAATCCAGTAGTTCTGAACAGCTTTCACCTTTGCTGCTGAC
 TGCTGCACCTCCTACATCTCACAAAGCATCCCGTGTTCACTCATGAAAAGTTATTT
 TGAAACGAGCAGCGAGTGCTCCAAGCCAGGTGTCATATTCCTCACCAAGAAGGG
 5 GCGGCAAGTCTGTGCCAAACCCAGTGGTCCGGGAGTTCAGGATTGCATGAAAAA
 GCTGAAGCCCTACTCAATATAATAATAAGAGACAAAAGAGGCCAGCCACCCAC
 CTCCAACACCTCCTGAGCCTCTGAAGCTCCCACCAGGCCAGCTCTCCTCCACAA
 CAGCTTCCCACAGCATGAAGATCTCCGTGGCTGCCATTCCCTTCTTCTCCTCATC
 ACCATCGCCCTAGGGACCAAGACTGAATCCTCCTCACAAACTGGGGGGAAACCG
 10 AAGTTGTTAAATAACAGCTAAAGTTGGTGGGGGGACCTTACCACCCCTCAGAGT
 GCTGCTTCACCTACACTACCTACAAGATCCCGCGTCAGCGGATTATGGATTACTA
 TGAGACCAACAGCCAGTGCTCCAAGCCCGGAATTGTCTTCATCACCAAAAGGGG
 CCATTCCGTCTGTACCAACCCCAAGTGACAAGTGGGTCCAGGACTATATCAAGGAC
 ATGAAGGAGAACTGAGTGACCCAGAAGGGGTGGCGAAGGCACAGCTCAGAGAC
 15 ATAAAGAGAAGATGCCAAGGCCCCCTCCTCCACCCACCGCTAACTCTCAGCCCCA
 GTCACCCTCTTGGAGCTTCCCTGCTTTGAATTAAGACCACTCATGCTC

SEQ ID NO: 548

>18046 BLOOD 1326922.7 M12125 g339951 Human fibroblast muscle-type tropomyosin

20 mRNA, complete cds. 0

GCGGCCGCACCCCCCGGCCGGGCGCGTGCTTCTGCCCCTGCAAGGTTTGGGCGCGAG
 GTGGGGGAGGGTCCCTGGTTGCCGGCCCCGCCCCGGTCCGTCCCGCCCTTTTAGGGC
 CCGCGCTGGCCGGGACGTCCAGTCCCGCTCCGTCTCCTCGCTGCCACGGGTG
 CACCCAGTCCGCTCACCCAGCCAGTCCGTCCGGTCTCACCCTGCGCGCCGG
 25 CCCACCCCCACCGCAGCCATGGACGCCATCAAGAAGAAGATGCAGATGCTGAA
 GCTGGACAAGGAGAACGCCATCGACCGCGCCGAGCAGGCCGAAGCCGACAAGA
 AGCAAGCTGAGGACCGCTGCAAGCAGCTGGAGGAGGAGCAGCAGGCCCTCCAG
 AAGAAGCTGAAGGGGACAGAGGATGAGGTGGAAAAGTATTCTGAATCCGTGAA
 GGAGGCCCAGGAGAACTGGAGCAGGCCGAGAAGAAGGCCACTGATGCTGAGG
 30 CAGATGTGGCCTCCCTGAACCGCCGCATTCAGCTGGTTGAGGAGGAGCTGGACC
 GGGCCCAGGAGCGCCTGGCTACAGCCCTGCAGAAGCTGGAGGAGGCCGAGAAG
 GCGGCTGATGAGAGCGAGAGAGGAATGAAGGTCATCGAAAACCGGGCCATGAA
 GGATGAGGAGAAGATGGAAGTGCAGGAGATGCAGCTGAAGGAGGCCAAGCACA
 TCGCTGAGGATTACAGACCGCAAATATGAAGAGGTGGCCAGGAAGCTGGTGATCC
 35 TGGAAGGAGAGCTGGAGCGCTCGGAGGAGAGGGCTGAGGTGGCCGAGAGCCGA
 GCCAGACAGCTGGAGGAGGAAGTTCGAACCATGGACCAGGCCCTCAAGTCCCTG
 ATGGCCTCAGAGGAGGAGTATTCCACCAAAGAAGATAAATATGAAGAGGAGATC
 AACTGTTGGAGGAGAAGCTGAAGGAGGCTGAGACCCGAGCAGAGTTTGCCGAG
 AGGTCTGTGGCAAAGTTGGAGAAAACCATCGATGACCTAGAAGAGACCTTGGCC
 40 AGTGCCAAGGAGGAGAACGTGAGATTACACAGACCTTGGACCAGACCTTGCTG
 GAACTCAACAACCTGTGAGGGCCAGCCCCACCCCAAGCCAGGCTATGGTTGCCA
 CCCCAACCAATAAACTGATGTTACTAGCCTCTCAAAAAAAAAAGAAAAGGGC
 GGC

45 SEQ ID NO: 549

>18061 BLOOD 227748.5 M74826 g182931 Human glutamate decarboxylase (GAD-2)

mRNA, complete cds. 0

ACCCGCCCTCGCCGCTCGGCCCGCGCGTCCCCGCGCGTGCCCTCCTCCCGCCAC
 ACGGCACGCACGCGCGCGCAGGGCCAAGCCGAGGCAGCCGCCCGCAGCTCGCAC

TCGCTGGCGACCTGCTCCAGTCTCCAAAGCCGATGGCATCTCCGGGCTCTGGCTT
TTGGTCTTTTCGGGTCGGAAGATGGCTCTGGGGATTCCGAGAATCCCGGCACAGCG
CGAGCCTGGTGCCAAGTGGCTCAGAAGTTCACGGGCGGCATCGGAAACAAACTG
TGCGCCCTGCTCTACGGAGACGCCGAGAAGCCGGCGGAGAGCGGGGGAGCCAA
5 CCCCCGCGGGCCGCCGCCGGAAGGCCGCTGCGCCTGCGACCAGAAGCCCTGC
AGCTGCTCCAAAGTGGATGTCAACTACGCGTTTCTCCATGCAACAGACCTGCTGC
CGGCGTGTGATGGAGAAAGGCCCACTTTGGCGTTTCTGCAAGATGTTATGAACAT
TTTACTTCAGTATGTGGTGAAAAGTTTCGATAGATCAACCAAAGTGATTGATTTC
CATTATCCTAATGAGCTTCTCCAAGAATATAATTGGGAATTGGCAGACCAACCAC
10 AAAATTTGGAGGAAATTTTGATGCATTGCCAAACAACCTCTAAAATATGCAATTAA
AACAGGGCATCCTAGATACTTCAATCAACTTTCTACTGGTTTGGATATGGTTGGA
TTAGCAGCAGACTGGCTGACATCAACAGCAAATACTAACATGTTACCTATGAA
ATTGCTCCAGTATTTGTGCTTTTGGAAATATGTCACACTAAAGAAAATGAGAGAAA
TCATTGGCTGGCCAGGGGGCTCTGGCGATGGGATATTTTCTCCCGGTGGCGCCAT
15 ATCTAACATGTATGCCATGATGATCGCACGCTTTAAGATGTTCCAGAAAGTCAAG
GAGAAAGGAATGGCTGCTCTTCCAGGCTCATTGCCTTCACGTCTGAACATAGTC
ATTTTCTCTCAAGAAGGGAGCTGCAGCCTTAGGGATTGGAACAGACAGCGTGAT
TCTGATTAAATGTGATGAGAGAGGGAAAATGATTCCATCTGATCTTGAAAGAAG
GATTCTTGAAGCCAAACAGAAAGGGTTTGTTTCCTTTCCTCGTGAGTGCCACAGCT
20 GGAACCACCGTGTACGGAGCATTTGACCCCTCTTAGCTGTCGCTGACATTTGCA
AAAAGTATAAGATCTGGATGCATGTGGATGCAGCTTGGGGTGGGGGATTACTGA
TGTCCCGAAAACACAAGTGGAAACTGAGTGGCGTGGAGAGGGCCAACTCTGTGA
CGTGGAATCCACACAAGATGATGGGAGTCCCTTTGCAGTGCTCTGCTCTCCTGGT
TAGAGAAGAGGGATTGATGCAGAATTGCAACCAAATGCATGCCTCCTACCTCTTT
25 CAGCAAGATAAACATTATGACCTGTCCTATGACACTGGAGACAAGGCCTTACAG
TGCGGACGCCACGTTGATGTTTTTAACTATGGCTGATGTGGAGGGCAAAGGGG
ACTACCGGGTTTGAAGCGCATGTTGATAAATGTTTGGAGTTGGCAGAGTATTTAT
ACAACATCATAAAAAACCGAGAAGGATATGAGATGGTGTTTGATGGGAAGCCTC
AGCACACAAATGTCTGCTTCTGGTACATTCTCCTCAAGCTTGCGTACTCTGGAAGA
30 CAATGAAGAGAGAATGAGTCGCCTCTCGAAGGTGGCTCCAGTGATTAAAGCCAG
AATGATGGAGTATGGAACCACAATGGTCAGCTACCAACCCTTGGGAGACAAGGT
CAATTTCTTCCGCATGGTCATCTCAAACCCAGCGGCAACTCACCAAGACATTGAC
TTCCTGATTGAAGAAATAGAACGCCTTGGACAAGATTTATAATAACCTTGCTCAC
CAAGCTGTTCCACTTCTCTAGAGAACATGCCCTCAGCTAAGCCCCCTACTGAGAA
35 ACTTCCTTTGAGAATTGTGCGACTTCACAAAATGCAAGGTGAACACCACTTTGTC
TCTGAGAACAGACGTTACCAATTATGGAGTGTACCAGCTGCCAAAATCGTAGGT
GTTGGCTCTGCTGGTCACTGGAGTAGTTGCTACTCTTCAGAATATGGACAAAGAA
GGCACAGGTGTAAATATAGTAGCAGGATGAGGAACCTCAAACCTGGGTATCATTT
GCACGTGCTCTTCTGTTCTCAAATGCTAAATGCAAACACTGTGTATTTATTAGTTA
40 GGTGTGCCAAACTACCGTTCCCAAATTGGTGTTTCTGAATGACATCAACATTCCC
CCAACATTACTCCATTACTAAAGACAGAAAAAATAAAAAACATAAAATATACAA
ACATGTGGCAACCTGTTCTTCTACCAAATATAAACTTGTGTATGATCCAAGTAT
TTTATCTGTGTTGTCTCTCTAAACCCAAATAAATGTGTAAATGTGGACACA

45 SEQ ID NO: 550

>18101 BLOOD 351841.7 U22384 g733134 Human lysyl oxidase gene, partial cds. 0
TTAATACGACCACTATAGGGAATTTGGCCCTCGAGGCAAGAATTCGGCACGATG
CGTGAACAAATAGCTGAGGGGCGGCCGGGCCAGAACGGCTTGTGTAACCTTTGCA
AACGTGCCAGAAAGTTTAAAATCTCTCCTCCTTCACTCCAGACACTGCCCCG

CTCTCCGGGACTGCCGCGCCGCTCCCCGTTGCCTTCCAGGACTGAGAAAGGGGAA
AGGGAAGGGTGCCACGTCCGAGCAGCCGCTTGACTGGGGAAGGGTCTGAATCC
CACCTTGGCATTGCTTGGTGGAGACTGAGATACCCGTGCTCCGCTCGCCTCCTT
GGTTGAAGATTTCTCCTTCCCTCACGTGATTTGAGCCCCGTTTTTATTTTCTGTGA
5 GCCACGTCCTCCTCGAGCGGGGTCAATCTGGCAAAGGAGTGATGCGCTTCGCCT
GGACCGTGCTCCTGCTCGGGCCTTTGCAGCTCTGCGCGCTAGTGCAGTGCGCCCC
TCCCGCCGCGGCCAACAGCAGCCCCGCGCGAGCCGCGGGCTCCGGGCGC
CTGGCGCCAGCAGATCCAATGGGAGAACACGGGCAGGTGTTTACGCTTGCTGAG
CCTGGGCTCACAGTACCAGCCTCAGCGCCGCGGGACCCGGGCGCCGCGTCCCT
10 GGTGCAGCCAACGCCTCCGCCCAGCAGCCCCGCACTCCGATCCTGCTGATCCGCG
ACAACCGCACCGCCGCGGCGCGAACGCGGACGGCCGGCTCATCTGGAGTACCG
CTGGCCGCCCCAGGCCACCGCCCGTCACTGGTTCCAAGCTGGCTACTCGACATC
TAGAGCCCGCGAAGCTGCGGCCTCGCGCGCGGAGAACCAGACAGCGCCGGGAG
AAGTTCCTGCGCTCAGTAACCTGCGGCCGCCCAGCCGCGTGGACGGCATGGTGG
15 GCGACGACCCTTACAACCCCTACAAGTACTCTGACGACAACCCTTATTACAATA
CTACGATACTTATGAAAGGCCAGACCTGGGGGCAGGTACCGGCCCGGATACGG
CACTGGCTACTTCCAGTACGGTCTCCAGACCTGGTGGCCGACCCCTACTACATC
CAGGCGTCCACGTACGTGCAGAAGATGTCCATGTACAACCTGAGATGCGCGGCG
GAGGAAAACCTGTCTGGCCAGTACAGCATAACAGGGCAGATGTCAGAGATTATGAT
20 CACAGGGTGCTGCTCAGATTTCCCCAAAGAGTGAAAAACCAAGGGACATCAGAT
TTCTTACCCAGCCGACCAAGATATTCCTGGGAATGGCACAGTTGTCAACATT
ACCACAGTATGGATGAGTTTAGCCACTATGACCTGCTTGATGCCAACACCGCAGAG
GAGAGTGGCTGAAGGCCACAAAGCAAGTTTGTGTCTTGAAGACACATCCTGTGA
CTATGGCTACCACAGGCGATTTGCATGTAAGTGCACACACAGGGATTGAGTCCT
25 GGCTGTTATGATACCTATGGTGCAGACATAGACTGCCAGTGGATTGATATTACAG
ATGTAAACCTGGAACTATATCCTAAAGGTCAGTGTAAACCCAGCTACCTGGT
TCCTGAATCTGACTATACCAACAATGTTGTGCGCTGTGACATTGCTACACAGGA
CATCATGCGTATGCCTCAGGCTGCACAATTTACCGTATTAGAAGGCAAAGCAAA
ACTCCCAATGGATAAATCAGTGCCTGGTGTCTGAAGTGGGAAAAAATAGACTA
30 ACTTCAGTAGGATTTATGTATTTTGAAGGAGAACAGAAAACAACAAAAGAAT
TTTTGTTTGGACTGTTTTCAATAACAAAGCACATAACTGGATTTTGAACGCTTAA
GTCATCATTACTTGGGAAATTTTTAATGTTTATTATTTACATCACTTTGTGAATTA
ACACAGTGTTCATTCTGTAATTACATATTTGACTCTTTCAAAGAAATCCAAATT
TCTCATGTTCTTTTGAATTGTAGTGCAAATGGTCAGTATTATCTAAATGAATG
35 AGCCAAAATGACTTTGAACTGAACTTTTCTAAAGTGCTGGAACCTTTAGTGAAAC
ATAATAATAATGGGTTTATATATGTCATAGCATAGATGAATTTAGAAACAATGCT
CCTACTGTTTAAATACATATGGACACATCTGGTGTGAGAAAGAAACAACACA
TTACCATTGGTGTCAAGAAATATTACTATATAGCAGAGAAATGGCAATACATGTA
CTCAGATAGTTACATCCCTATATAAAAAGTATGTTTACATTTAAAAAATTAGTAG
40 ATAATTCTTTCTTTCAAGTGACAAATTTTCACTTTGACTTGAGTCAACTTTTGT
TGGAACAAATTAAGTAAGGGAGCTGCCCAATCCTGTCTGATATTTCTTGAGGCTG
CCCTCTATCATTTTATCTTTCCCATGGGCAGAGATGTTGTAAGTGGGATTCTTAAT
ATCACCATTCTTGGGACTGGTATACATAAGGCAGCCGTGAACTGGAAAGTCATT
TTGATGACTGATGTGATACATCCAGAGGTAAAATGCATTTAAACATATTAAGTA
45 TTTGCCAAAGATACAATTTTCTTGCTGACATAAAAATCACACAAACAAGTCCCCC
CCAAACCACAACCTGTCTCTCAAATAGCTTAAAAAATTGAAAAACATTTTAGGAT
TTTTCAAGTTTCTAGATTTTAAAAAGATGTTTCACTATTAGAGGAATGTTAAAA
ATTTTATATTATCTAGAACACAGGAACATCATCCTGGGTATTTCAGGAATCAGTC
ACACATGTGTGTGTGTCTGAGATATAGTCTAAATTAGCAAAGCACATAGTATTAC

ATACTTGAGGGGTTGGTGAACAAAGGAAAAATATACTTTCTGCAAAACCAAGGA
 CTGTGCTGCGTAATGAGACAGCTGTGATTTTCATTTGAAACTGTGAAACCATGTGC
 CATAATAGAATTTTGAGAATTTTGCTTTTACCTAAATTCAAGAAAATGAAATTAC
 ACTTTTAAGTTAGTGGTGCTTAAGCATAATTTTTCCTATATTAACCAGTATTAAAA
 5 TCTCAAGTAAGATTTTCCAGTGCCAGAACATGTTAGGTGGAATTTTAAAAGTGCC
 TCGGCATCCTGTATTACATGTCATAGAATTGTAAAGTCAACATCAATTACTAGTA
 ATCATTCTGCACTCACTGGGTGCATAGCATGGTTAGAGGGGCTAGAGATGGACC
 AGTCATCAACTGGCGGATATAGCGGTACATATGATCCTTAGCCACCAGGGGCACA
 AGCTTACCAGTAGACAATAACAGACAGAGCTTTTGTGAGCTGTAAGTGAAGTATG
 10 GAATAGCTTCTTTGATGTACCTCTTTGCCTTAAATTGCTTTTGTAGTTCTAAGATTG
 TAGAATGATCCTTTCAAATTGTAATCTTTTCTAACAGAGATATTTTAATACTTG
 CTTTCTTAAAAAACAAAAAACTACTGTCAGTATTAATACTGAGCCAGACTGGCA
 TCTACAGATTTTCAAGATCTATCATTTTATTGATTCTTAAGCTTGTATTAATACTAG
 GCAATATCATCATGGATACATAGGAGAAGACACATTTACAATCATTCAATTGGGCC
 15 TTTTATCTGTCTATCCATCCATCATCATTTGAAGGCCTAATATATGCCAAGTACTC
 ACATGGTATGCATTGAGACATAAAAAAGACTGTCTATAACCTCAATAAGTATTAA
 AAATCCCATTATTACCCATAAGGTTTCATCTTATTTTCATTTTGTAGGGAATAAAATTA
 CATGTCTATGAAATTTCAATTTTAAGCACTATTGTTTTTCATGACCATAATTTATT
 TTTAAAAATAAATTAAAGGTTAATTATATGCATGTATGTATTTCTAATAATTAAA
 20 AATGTGTTCAATCCCTGAAATGTCTGCCTTTTAAATATAACACCTACTATTTGGTT
 AATTTTGACGATTTTTTTTTTTTCAATTAGGAAGCTAAAAATACTACTTTATTCCTT
 ATATGAACATTCATCCCCC

SEQ ID NO: 551

25 >18105 BLOOD 350513.1 M95167 g703094 Human dopamine transporter (SLC6A3)
 mRNA, complete cds. 0
 ACCGCTCCGGAGCGGGAGGGGAGGCTTCGCGGAACGCTCTCGGCGCCAGGACTC
 GCGTGCAAAGCCCAGGCCCGGGCGGCCAGACCAAGAGGGAAGAAGCACAGAAT
 TCCTCAACTCCCAGTGTGCCCATGAGTAAGAGCAAATGCTCCGTGGGACTCATGT
 30 CTTCCGTGGTGGCCCCGGCTAAGGAGCCCAATGCCGTGGGCCCCGAAGGAGGTGG
 AGCTCATCCTTGTCAAGGAGCAGAACGGAGTGCAGCTCACCAGCTCCACCCTCAC
 CAACCCGCGGCAGAGCCCCGTGGAGGCCAGGATCGGGAGACCTGGGGCAAGA
 AGATCGACTTTCTCCTGTCCGTCAATTGGCTTTGCTGTGGACCTGGCCAACGTCTGG
 CGGTTCCCTACCTGTGCTACAAAAATGGTGGCGGTGCCTTCCTGGTCCCCTACC
 35 TGCTCTTCATGGTCATTGCTGGGATGCCACTTTTCTACATGGAGCTGGCCCTCGGC
 CAGTTCAACAGGGAAGGGGCCGCTGGTGTCTGGAAGATCTGCCCCATACTGAAA
 GGTGTGGGCTTCACGGTCATCCTCATCTCACTGTATGTCGGCTTCTTCTACAACGT
 CATCATCGCCTGGGCGCTGCACTATCTCTTCTCCTCCTTCACCACGGAGCTCCCCT
 GGATCCACTGCAACAACCTCCTGGAACAGCCCCAAGTCTCGGATGCCCATCCTGG
 40 TGAATCCAGTGGAGACAGCTCGGGCCTCAACGACACTTTTGGGACCACACCTGCT
 GCCGAGTACTTTGAACGTGGCGTGTGTCACCTCCACCAGAGCCATGGCATCGACG
 ACCTGGGGCCTCCGCGGTGGCAGCTCACAGCCTGCCTGGTGTGCTGGTCATCGTGCT
 GCTCTACTTCAGCCTCTGGAAGGGCGTGAAGACCTCAGGGAAGGTGGTATGGAT
 CACAGCCACCATGCCATACGTGGTCTCACTGCCCTGCTCCTGCGTGGGGTCAAC
 45 CTCCCTGGAGCCATAGACGGCATCAGAGCATACTGAGCGTTGACTTCTACCGGC
 TCTGCGAGGCGTCTGTTTGGATTGACGCGGCCACCCAGGTGTGCTTCTCCCTGGG
 CGTGGGGTTTCGGGGTGTGATCGCCTTCTCCAGCTACAACAAGTTCACCAACAAC
 TGCTACAGGGACGCGATTGTACACCTCCATCAACTCCCTGACGAGCTTCTCCT
 CCGGCTTCGTCTCTTCTCCTTCCTGGGGTACATGGCACAGAAGCACAGTGTGCC

CATCGGGGACGTGGCCAAGGACGGGCCAGGGCTGATCTTCATCATCTACCCGGA
AGCCATCGCCACGCTCCCTCTGTCTCAGCCTGGGCGGTGGTCTTCTTCATCATGC
TGCTCACCCTGGGTATCGACAGCGCCATGGGTGGTATGGAGTCAGTGATCACC GG
GCTCATCGATGAGTTCCAGCTGCTGCACAGACACCGTGAGCTCTTCACGCTCTTC
5 ATCGTCCTGGCGACCTTCCTCCTGTCCCTGTTCTGCGTCACCAACGGTGGCATCTA
CGTCTTCACGCTCCTGGACCATTTTGCAGCCGGCACGTCCATCCTCTTTGGAGTGC
TCATCGAAGCCATCGGAGTGGCCTGGTTCTATGGTGTGTTGGGCAGTTCAGCGACGA
CATCCAGCAGATGACCGGGCAGCGGCCAGCCTGTACTGGCGGCTGTGCTGGAA
GCTGGTCAGCCCCTGCTTTCTCCTGTTTCGTGGTTCGTGGTCAGCATTGTGACCTTCA
10 GACCCCCCCTACTACGGAGCCTACATCTTCCCCGACTGGGCCAACCGCTGGGCTG
GGTCATCGCCACATCCTCCATGGCCATGGTGCCCATCTATGCGGCCTACAAGTTC
TGCAGCCTGCCTGGGTCTTTTCGAGAGAACTGGCCTACGCCATTGCACCCGAGA
AGGACCGTGAGCTGGTGGACAGAGGGGAGGTGCGCCAGTTCACGCTCCGCCACT
GGCTCAAGGTGTAGAGGGAGCAGAGACGAAGACCCCAGGAAGTCATCCTGCAAT
15 GGGAGAGACACGAACAAACCAAGGAAATCTAAGTTTCGAGAGAAAGGAGGGCA
ACTTCTACTCTTCAACCTCTACTGAAAACACAAACAACAAAGCAGAAGACTCCTC
TCTTCTGACTGTTTACACCTTTCCTGTCCGGGAGCGCACCTCGCCGTGTCTTGTGT
TGCTGTAATAACGACGTAGATCTGTGCAGCGAGGTCCACCCCGTTGTTGTCCCTG
CAGGGCAGAAAAACGTCTAACTTCATGCTGTCTGTGTGAGGCTCCCTCCCTCCCT
20 GCTCCCTGCTCCCGGCTCTGAGGCTGCCCCAGGGGCACTGTGTTCTCAGGCGGGG
ATCACGATCCTTGTAGACGCACCTGCTGAGAATCCCCGTGCTCACAGTAGCTTCC
TAGACCATTACTTTGCCCATATTA AAAAGCCAAAGTGTCCTGCTTGGTTTAGCTGT
GCAGAAGGTGAAATGGAGGAAACCAACAATTCATGCAAAAGTCCTTTCCCGATGC
GTGGCTCCCAGCAGAGGGCCGTAAATTGAGCGTTTCAAGTTGACACATTGCACACAC
25 AGTCTGTTTCAGAGGCATTGGAGGATGGGGGTCTGTTATGTCTCACCAGGAAATT
CTGTTTATGTTCTTGCAGCAGAGAGAAATAAACTCCTTGAAACCAGCTCAGGCT
ACTGCCACTCAGGCAGCCTGTGGGTCTTGTGGTGTAGGGAACGGCCTGAGAGG
AGCGTGTCTATCCCCGGACGCATGCAGGGCCCCCACAGGAGCGTGTCTATCCC
CGGACGCATGCAGGGCCCCCACAGGAGCATGTCCTATCCCTGGACGCATGCAGG
30 GCCCCACAGGAGCGTGTACTACCCACGAACGCATGCAGGGCCCCCACAGGAGC
GTGTACTACCCAGGACGCATGCAGGGCCCCCACTGGAGCGTGTACTACCCAG
GACGCATGCAGGGCCCCCACAGGAGCGTGTCTATCCCCGGACCGGACGCATGC
AGGGCCCCCACAGGAGCGTGTACTACCCAGGACGCATGCAGGGCCCCCACAGG
AGCGTGTACTACCCAGGATGCATGCAGGGCCCCCACAGGAGCGTGTACTACCC
35 CAGGACGCATGCAGGGCCCCCATGCAGGCAGCCTGCAGACCACACTCTGCCTGG
CCTTGAGCCGTGACCTCCAGGAAGGGACCCCCACTGGAATTTTATTTCTCTCAGGT
GCGTGCCACATCAATAACAACAGTTTTTATGTTTGCGAATGGCTTTTTAAATCA
TATTTACCTGTGAATCAAAACAATTCAAGAATGCAGTATCCGCGAGCCTGCTTG
CTGATATTGCAGTTTTTGTTTACAAGAATAATTAGCAATACTGAGTGAAGGATGT
40 TGGCCAAAAGCTGCTTTCCATGGCACACTGCCCTCTGCCACTGACAGGAAAGTGG
ATGCCATAGTTTGAATTCATGCCTCAAGTCGGTGGGCGCTGCCTACGTGCTGCCCG
AGGGCAGGGGCCGTGCAGGGCCAGTCATGGCTGTCCCCTGCAAGTGGACGTGGG
CTCCAGGGACTGGAGTGTAAATGCTCGGTGGGAGCCGTGAGCCTGTGAACTGCCA
GGCAGCTGCAGTTAGCACAGAGGATGGCTTCCCCATTGCCTTCTGGGGAGGGAC
45 ACAGAGGACGGCTTCCCCATCGCCTTCTGGCCGCTGCAGTCAGCACAGAGAGCG
GCTTCCCCATTGCCTTCTGGGGAGGGACACAGAGGACAGCTTCCCCATCGCCTTC
TGGCTGCTGCAGTCAGCACAGAGAGCGGCTTCCCCATCGCCTTCTGGGGAGGGG
CTCCGTGTAGCAACCCAGGTGTTGTCCGTGTCTGTTGACCAATCTCTATTCAGCAT

CGTGTGGGTCCCTAAGCACAATAAAAGACATCCACAATGGAAAAAAAAAAGG
AATTC

SEQ ID NO: 552

5 >18166 BLOOD 350204.2 U07695 g495472 Human tyrosine kinase (HTK) mRNA,
complete cds. 0

GCGCCCTGGGGCCGAGGCCACCGGGAAGGTGAATGTCAAGACGCTGCGTCTGGG
ACCGCTCAGCAAGGCTGGCTTCTACCTGGCCTTCCAGGACCAGGGTGCCTGCATG
GCCCTGCTATCCCTGCACCTCTTCTACAAAAAGTGCGCCCAGCTGACTGTGAACC
10 TGA CTGATTCCCGGAGACTGTGCCTCGGGAGCTGGTTGTGCCCGTGGCCGGTAG
CTGCGTGGTGGATGCCGTCCCCGCCCTGGCCCCAGCCCCAGCCTCTACTGCCAG
CACGCTCCGGGGCCCGCCGCCCGCGCGCGCGGAACAGACGCGGGGCCACACTTGG
CGCCGACGACCGGTGCCCCGCACGCTCGCATGGGCCCGCGCTGAGGGCCCCGAC
GAGGAGTCCCGCGCGGAGTATCGGAGTCCACCCGCCAGGGAGAGTCAGACCTG
15 GGGGGGCGAGGGCCCCCAAACCTCAGTTCGGATCCTACCCGAGTGAGGCGGCGC
CATGGAGCTCCGGGTGCTGCTCTGCTGGGCTTCGTTGGCCGACGCTTTGGAAGAG
ACCCTGCTGAACACAAAATTGGAACTGCTGATCTGAAGTGGGTGACATTCCCTC
AGGTGGACGGGCAGTGGGAGGAACTGAGCGGCCTGGATGAGGAACAGCACAGC
GTGCGCACCTACGAAGTGTGTGACGTGCAGCGTGCCCCGGGCCAGGCCACTGG
20 CTTTCGCACAGGTTGGGTCCACGGCGGGGCGCCGTCCACGTGTACGCCACGCTGC
GCTTCACCATGCTCGAGTGCCTGTCCCTGCCTCGGGCTGGGCGCTCCTGCAAGGA
GACCTTGACCGTCTTCTACTATGAGAGCGATGCGGACACGGCCACGGGCCCTCAG
CCAGCCTGGATGGAGAACCCTACATCAAGGTGGACACGGTGGCCGCGGAGCAT
CTCACCCGGAAGCGCCCTGGGGCCGAGGCCACCGGGAAGGTGAATGTCAAGACG
25 CTGCGTCTGGGACCGCTCAGCAAGGCTGGCTTCTACCTGGCCTTCCAGGACCAGG
GTGCCTGCATGGCCCTGCTATCCCTGCACCTCTTCTACAAAAAGTGCGCCCAGCT
GACTGTGAACCTGACTCGATTCCCGGAGACTGTGCCTCGGGAGCTGGTTGTGCCC
GTGGCCGGTAGCTGCGTGGTGGATGCCGTCCCCGCCCTGGCCCCAGCCCCAGCC
TCTACTGCCGTGAGGATGGCCAGTGGGCCGAACAGCCGGTCACGGGCTGCAGCT
30 GTGCTCCGGGGTTTCGAGGCAGCTGAGGGGAACACCAAGTGCCGAGCCTGTGCCC
AGGGCACCTTCAAGCCCCTGTCAGGAGAAGGGTCCTGCCAGCCATGCCAGCCA
ATAGCCACTCTAACACCATTGGATCAGCCGTCTGCCAGTGCCGCGTCGGGTACTT
CCGGGCACGCACAGACCCCCGGGGTGACCCCTGCACCACCCCTCCTTCGGCTCCG
CGGAGCGTGGTTTCCCGCCTGAACGGCTCCTCCCTGCACCTGGAATGGAGTGCCC
35 CCCTGGAGTCTGGTGGCCGAGAGGACCTCACCTACGCCCTCCGCTGCCGGGAGTG
CCGACCCGGAGGCTCCTGTGCGCCCTGCGGGGGAGACCTGACTTTTGACCCCGGC
CCCCGGGACCTGGTGGAGCCCTGGGTGGTGGTTCGAGGGCTACGTCCTGACTTCA
CCTATACCTTTGAGGTCACTGCATTGAACGGGGTATCCTCCTTAGCCACGGGGCC
CGTCCCATTGAGCCTGTCAATGTCACCACTGACCGAGAGGTACCTCCTGCAGTG
40 TCTGACATCCGGGTGACGCGGTCTCACCCAGCAGCTTGAGCCTGGCCTGGGCTG
TTCCCCGGGCACCCAGTGGGGCTGTGCTGGACTACGAGGTCAAATACCATGAGA
AGGGCGCCGAGGGTCCCAGCAGCGTGCGGTTCTGAAGACGTCAGAAAACCGGG
CAGAGCTGCGGGGGCTGAAGCGGGGAGCCAGCTACCTGGTGCAGGTACGGGCGC
GCTCTGAGGCCGGCTACGGGGCCCTTCGGCCAGGAACATCACAGCCAGACCCAAC
45 TGGATGAGAGCGAGGGCTGGCGGGAGCAGCTGGCCCTGATTGCGGGCACGGCAG
TCGTGGGTGTGGTCCTGGTCCTGGTGGTCATTGTGGTTCGAGTTCTCTGCCTCAGG
AAGCAGAGCAATGGGAGAGAAGCAGAATATTCGGACAAACACGGACAGTATCT
CATCGGACATGGTACTAAGGTCTACATCGACCCCTTCACTTATGAAGACCCTAAT
GAGGCTGTGAGGGAATTTGCAAAAGAGATCGATGTCTCCTACGTCAAGATTGAA

GAGGTGATTGGTGCAGGTGAGTTTGGCGAGGTGTGTCGGGGGCGGCTCAAGGCC
 CCAGGGAAGAAGGAGAGCTGTGTGGCAATCAAGACCCTGAAGGGTGGCTACACG
 GAGCGGCAGCGGCGTGAGTTTCTGAGCGAGGCCTCCATCATGGGCCAGTTCGAG
 CACCCCAATATCATCCGCCTGGAGGGCGTGGTCACCAACAGCATGCCCGTCATGA
 5 TTCTCACAGAGTTCATGGAGAACGGCGCCCTGGACTCCTTCCTGCGGGCTAAACGA
 CGGACAGTTCACAGTCATCCAGCTGCGTGGGCATGCTGCGGGGCATCGCCTCGG
 GCATGCGGTACCTTGCCGAGATGAGCTACGTCCACCGAGACCTGGCTGCTCGCAA
 CATCCTAGTCAACAGCAACCTCGTCTGCAAAGTGTCTGACTTTGGCCTTTCCCGA
 TTCCTGGAGGAGAACTCTTCCGATCCACCTACACGAGCTCCCTGGGAGGAAAG
 10 ATTCCCATCCGATGGACTGCCCCGAGGCCATTGCCTTCCGGAAGTCACTTCCG
 CCAGTGATGCCTGGAGTTACGGGATTGTGATGTGGGAGGTGATGTCATTTGGGGA
 GAGGCCGTACTGGGACATGAGCAATCAGGACGTGATCAATGCCATTGAACAGGA
 CTACCGGCTGCCCCGCCCCCAGACTGTCCACCTCCCTCCACCAGCTCATGCTG
 GACTGTTGGCAGAAAGACCGGAATGCCCGGCCCGCTTCCCCCAGGTGGTCAGC
 15 GCCCTGGACAAGATGATCCGGAACCCCGCCAGCCTCAAAATCGTGGCCCGGGAG
 AATGGCGGGGCTCACACCCTCTCCTGGACCAGCGGCAGCCTCACTACTCAGCTT
 TTGGCTCTGTGGGCGAGTGGCTTCGGGCCATCAAAATGGGAAGATACGAAGAAA
 GTTTCGCAGCCGCTGGCTTTGGCTCCTTCGAGCTGGTCAGCCAGATCTCTGCTGA
 GGACCTGCTCCGAATCGGAGTCACTCTGGCGGGACACCAGAAGAAAATCTTGGC
 20 CAGTGTCCAGCACATGAAGTCCCAGGCCAAGCCGGGAACCCCGGGTGGGACAGG
 AGGACCGGCCCGCAGTACTGACCTGCAGGAACCTCCCCACCCAGGGACACCGC
 CTCCCCATTTTCCGGGGCAGAGTGGGGACTCACAGAGGGCCCCCAGCCCTGTGCC
 CGCTGGATTGCACTTTGAGCCCGTGGGGTGAGGAGTTGGCAATTTGGAGAGACA
 GGATTTGGGGGTTCTGCCATAATAGGAGGGGAAAATCACCCCCAGCCACCTCG
 25 GGGAACTCCAGACCAAGGGTGAGGGCGCCTTTCCCTCAGGACTGGGTGTGACCA
 GAGGAAAAGGAAGTGCCCAACATCTCCAGCCTCCCCAGGTGCCCCCCTCACCTT
 GATGGGTGCGTTCCCGCAGACCAAAGAGAGTGTGACTCCCTTGCCAGCTCCAGA
 GTGGGGGGGCTGTCCCAGGGGGCAAGAAGGGGTGTCAGGGGCCAGTGACAAAA
 TCATTGGGGTTTGTAGTCCCAACTTGCTGCTGTACCCACCAAATCAATCATTTTTT
 30 TTCCCTTGTAATGCCCTCCCCCAGCTGCTGCCTTCATATTGAAGGTTTTTGAGT
 TTTGTTTTTGGTCTTAATTTTTCTCCCCGTTCCCTTTTTGTTTTCTTCGTTTTGTTTT
 CTACCGTCTTGTGATAACTTTGTGTTGGAGGGAACCTGTTTCACTATGGCCTCCT
 TTGCCCAAGTTGAAACAGGGGCCCATCATCATGTCTGTTTCCAGAACAGTGCCTT
 GGTATCCACATCCCCGACCCCGCCTGGGACCCCCAAGCTGTGTCTATGAAG
 35 GGGTGTGGGGTGAGGTAGTGAAAAGGGCGGTAGTTGGTGGTGAACCCAGAAAC
 GGACGCCGGTGCTTGGAGGGGTTCTTAAATTATATTTAAAAAAGTAACTTTTTGT
 ATAAATAAAAGAAAATGGGACGTGTCCAGCTCCAGGGGTG

SEQ ID NO: 553

40 >18214 BLOOD 407199.2 AF154830 g5020419 Human carbamyl phosphate synthetase I
 mRNA, complete cds. 0
 GAGCTGTAGATTTCGGCACGAGACACTGACTGCACCCCTCCCAGATTTCTTTTACA
 TTAATAAAAAAGTCTTATCACACAATCTCATAAAATTTATGTAATTTCAATTAATT
 TTAGCCACAAATCATCTTCAAAATGACGAGGATTTTGACAGCTTTCAAAGTGGTG
 45 AGGACACTGAAGACTGGTTTTGGCTTTACCAATGTGACTGCACACCAGAAATGG
 AAATTTTCAAGACCTGGCATCAGGCTCCTTTCTGTCAAGGCACAGACAGCACACA
 TTGTCTGGAAGATGGAACATAAGATGAAAGGTTACTCCTTTGGCCATCCATCCTC
 TGTTGCTGGTGAAGTGGTTTTTAATACTGGCCTGGGAGGGTACCCAGAAGCTATT
 ACTGACCCTGCCTACAAAGGACAGATTCTCACAATGGCCAACCCTATTATTGGGA

ATGGTGGAGCTCCTGATACTACTGCTCTGGATGAACTGGGACTTAGCAAATATTT
 GGAGTCTAATGGAATCAAGGTTTCAGGTTTGCTGGTGCTGGATTATAGTAAAGAC
 TACAACCACTGGCTGGCTACCAAGAGTTTAGGGCAATGGCTACAGGAAGAAAAG
 GTTCCTGCAATTTATGGAGTGGACACAAGAATGCTGACTAAAATAATTCGGGATA
 5 AGGGTACCATGCTTGGGAAGATTGAATTTGAAGGTCAGCCTGTGGATTTTGTGGA
 TCCAAATAAACAGAATTTGATTGCTGAGGTTTCAACCAAGGATGTCAAAGTGTAC
 GGCAAAGGAAACCCACAAAAGTGGTAGCTGTAGACTGTGGGATTAAAAACAAT
 GTAATCCGCCTGCTAGTAAAGCGAGGAGCTGAAGTGCACCTAGTTCCCTGGAACC
 ATGATTTTACCAAGATGGAGTATGATGGGATTTTGATCGCGGGAGGACCGGGGA
 10 ACCCAGCTCTTGCAGAACCACTAATTCAGAATGTCAGAAAGATTTTGGAGAGTG
 ATCGCAAGGAGCCATTGTTTGAATCAGTACAGGAACTTAATAACAGGATTGG
 CTGCTGGTGCCAAAACCTACAAGATGTCCATGGCCAACAGAGGGCAGAATCAGC
 CTGTTTTGAATATCACAAACAAACAGGCTTTCATTACTGCTCAGAATCATGGCTA
 TGCCTTGGACAACCTCTCTCCCTGCTGGCTGGAAACCACTTTTTGTGAATGTCAAC
 15 GATCAAACAAATGAGGGGATTATGCATGAGAGCAAACCTTCTTCGCTGTGCAG
 TTCCACCCAGAGGTCACCCCGGGGCCAATAGACACTGAGTACCTGTTTGATTCCCT
 TTTTCTCACTGATAAAGAAAGGAAAAGCTACCACCATTACATCAGTCTTACCGAA
 GCCAGCACTAGTTGCATCTCGGGTTGAGGTTTCCAAAGTCCTTATTCTAGGATCA
 GGAGGTCTGTCCATTGGTCAGGCTGGAGAATTTGATTACTCAGGATCTCAAGCTG
 20 TAAAAGCCATGAAGGAAGAAAATGTCAAACTGTTCTGATGAACCCAAACATTG
 CATCAGTCCAGACCAATGAGGTGGGCTTAAAGCAAGCGGATACTGTCTACTTTCT
 TCCCATCACCCCTCAGTTTGTACAGAGGTCATCAAGGCAGAACAGCCAGATGG
 GTTAATTTCTGGGCATGGGTGGCCAGACAGCTCTGAACTGTGGAGTGGAACTATTC
 AAGAGAGGTGTGCTCAAGGAATATGGTGTGAAAGTCCTGGGAACTFCAGTTGAG
 25 TCCATTATGGCTACGGAAGACAGGCAGCTGTTTTTCAGATAAACTAAATGAGATCA
 ATGAAAAGATTGCTCCAAGTTTTTGCAGTGGAATCGATTGAGGATGCACTGAAGG
 CAGCAGACACCATTGGCTACCCAGTGATGATCCGTTCCGCCTATGCACTGGGTGG
 GTTAGGCTCAGGCATCTGTCCCAACAGAGAGACTTTGATGGACCTCAGCACAAA
 GGCTTTTGCTATGACCAACCAAATTTCTGGTGGAGAAGTCAGTGACAGGTTGGAA
 30 AGAAATAGAATATGAAGTGGTTCGAGATGCTGATGACAATTGTGTCACTGTCTGT
 AACATGGAAAATGTTGATGCCATGGGTGTTACACAGGTGACTCAGTTGTTGTGG
 CTCCTGCCCAGACACTCTCCAATGCCGAGTTTCAGATGTTGAGACGTACTTCAAT
 CAATGTTGTTGCGCCACTTGGGCATTGTGGGTGAATGCAACATTCAGTTTGCCCTTC
 ATCTACCTCAATGGAATACTGCATCATTGAAGTGAATGCCAGACTGTCCCGAAG
 35 CTCTGCTCTGGCCTCAAAAGCCACTGGCTACCCATTGGCATTCAATTGCTGCAAAG
 ATTGCCCTAGGAATCCCACTTCCAGGAATTAAGAACGTCGTATCCGGGAAGACAT
 CAGCCTGTTTTGAACCTAGCCTGGATTACATGGTCAACCAAGATTCCCCGCTGGGA
 TCTTGACCGTTTTTCATGGAACATCTAGCCGAATTGGTAGCTCTATGAAAAGTGTA
 GGAGAGGTCATGGCTATTGGTCGTACCTTTGAGGAGAGTTTCCAGAAAGCTTTAC
 40 GGATGTGCCACCCATCTATAGAAGGTTTCACTCCCCGTCTCCCAATGAACAAAGA
 ATGGCCATCTAATTTAGATCTTAGAAAAGAGTTGTCTGAACCAAGCAGCACGCGT
 ATCTATGCCATTGCCAAGGCCATTGATGACAACATGTCCCTTGATGAGATTGAGA
 AGCTCACATACATTGACAAGTGGTTTTTGTATAAGATGCGTGATATTTTAAACAT
 GGAAAAGACACTGAAAGGGGCTCAACAGTGAGTCCATGACAGAAGAAACCTGA
 45 AAAGGGCAAAGGAGATTGGGTCTCAGATAAGCAGATTTCAAATGCCTTGGGC
 TCACTGAGGCCCAGACAAGGGAGCTGAGGTTAAAGAAAAACATCCACCCTTGGG
 TTAAACAGATTGATACACTGGCTGCAGAATACCCATCAGTAACAACTATCTCTA
 TGTTACCTACAATGGTCAGGAGCATGATGTCAATTTTGATGACCATGGAATGATG
 GTGCTAGGCTGTGGTCCATATCACATTGGCAGCAGTGTGGAATTTGATTGGTGTG

CTGTCTCTAGTATCCGCACACTGCGTCAACTTGGCAAGAAGACGGTGGTGGTGAA
TTGCAATCCTGAGACTGTGAGCACAGACTTTGATGAGTGTGACAACTGTACTTT
GAAGAGTTGTCCTTGGAGAGAATCCTAGACATCTACCATCAGGAGGCATGTGGT
GGCTGCATCATATCAGTTGGAGGCCAGATTCCAAACAACCTGGCAGTTCCTCTAT
5 ACAAGAATGGTGTCAAGATCATGGGCACAAGCCCCCTGCAGATCGACAGGGCTG
AGGATCGCTCCATCTTCTCAGCTGTCTTGGATGAGCTGAAGGTGGCTCAGGCACC
TTGGAAAGCTGTTAATACTTTGAATGAAGCACTGGAATTTGCAAAGTCTGTGGAC
TACCCCTGCTTGTTGAGGCCTTCCTATGTTTTGAGTGGGTCTGCTATGAATGTGGT
ATTCTCTGAGGATGAGATGAAAAAATTCCTAGAAGAGGCGACTAGAGTTTCTCA
10 GGAGCACCCAGTGGTGCTGACAAAATTTGTTGAAGGGGCCCCGAGAAGTAGAAAT
GGACGCTGTTGGCAAAGATGGAAGGGTTATCTCTCATGCCATCTCTGAACATGTT
GAAGATGCAGGTGTCCACTCGGGAGATGCCACTCTGATGCTGCCACACAAACC
ATCAGCCAAGGGGCCATTGAAAAGGTGAAGGATGCTACCCGGAAGATTGCAAAG
GCTTTTGCCATCTCTGGTCCATTCAACGTCCAATTTCTTGTCAAAGGAAATGATGT
15 CTTGGTGATTGAGTGTAACCTTGAGAGCTTCTCGATCCTTCCCCTTTGTTTCCAAGA
CTCTTGGGGTTGACTTCATTGATGTGGCCACCAAGGTGATGATTGGAGAGAATGT
TGATGAGAAACATCTTCCAACATTGGACCATCCCATAAATTCCTGCTGACTATGTT
GCAATTAAGGCTCCCATGTTTTCTGGCCCCGGTTGAGGGATGCTGACCCCATTC
TGAGATGTGAGATGGCTTCCACTGGAGAGGTGGCTTGCTTTGGTGAAGGTATTCA
20 TACAGCCTTCCCTAAAGGCAATGCTTTCCACAGGATTTAAGATACCCCGAAAGGC
ATCCTGATAGGCATCCAGCAATCATTCCGGCCAAGATTCCCTTGGTGTGGCTGAAC
AATTACACAATGAAGGTTTCAAGCTGTTTGCCACGGAAGCCACATCAGACTGGCT
GAACGCCAACAATGTCCCTGCCACCCAGTGGCATGGCCGTCTCAAGAAGGACA
GAATCCCAGCCTCTCTTCCATCAGAAAATTGATTAGAGATGGCAGCATTGACCTA
25 GTGATTAACCTTCCCAACAACAACACTAAATTTGTCCATGATAATTATGTGATTC
GGAGGACAGCTGTTGATAGTGGAATCCCTCTCCTCACTAATTTTCAGGTGACCAA
ACTTTTTGCTGAAGCTGTGCAGAAATCTCGCAAGGTGGACTCCAAGAGTCTTTTC
CACTACAGGCAGTACAGTGCTGGAAGAGCAGCATAGAGATGCAGACACCCAGC
CCCATTATTAAATCAACCTGAGCCACATGTTATCTAAAGGAAGTATTCACAACT
30 TTCTCAGAGATGAATATTGATACTAAACTTCATTTTCAGTTTACTTTGTTATGCCT
TAATATTCTGTGTCTTTTGCAATTAATTTGTGAGTCACTTCTTCAAAACCTTACAG
TCCTTCCTAAGTTACTCTTCATGAGATTTTCATCCATTTACTAATACTGTATTTTTGG
TGGACTAGGCTTGCTATGTGCTTATGTGTAGCTTTTTACTTTTTATGGTGCTGAT
TAATGGTGATCAAGGTAGGAAAAGTTGCTGTTCTATTTTCTGAACTCCTTCTATAC
35 TTTAAGATACTCTATTTTTTAAACACTATCTGCAAACTCAGGACACTTTAACAGG
GCAGAATACTCTAAAAACTTGATAAAATTAATATAGATTTAATTTATGAACCTT
CCATCATGATGTTTGTGTATTGCTTCTTTTTGGATCCTCATTCTCACCCATTGGCT
AATCCAGGAATATTGTTATCCCTTCCCATTAATTGAAGTTGAGAAATGTGACAG
AGGCATTTAGAGTATGGACTTTTCTAANCTNNNNNNNNNNNNNNNNNNNNNNNNNN
40 NNN
NNATGGA
TTTCTTTAAGGAATACTGGTTTGCAGTTTGTCTTCTGGACTATATCAGCAGATGG
TAGACAGTGTATATGTAGATGTGTTGTTGTTTTATCATTGGATTTTAACTTGCC
CGAGTGAAATAATCAGATTTTTGTCATTACACTCTCCCCCAGTTTTGGAATAACT
45 TGGAAGTAAGGTTTCATTCCCTTAAGACGATGGATTCTGTTGAACTATGGGGTCCC
AACTGCACTATTAATCCACCCACTGTAAGGGCAAGGACACCATTCTTCTACA
TATAAGAAAAAAGTCTCTCCCAAGGGCAGCCTTTGTTACTTTTAAATATTTTCTG
TTATTACAAGTGCTCTAATTGTGAACTTTTAAATAAAATACTATTAAGAGGTA
AAAAAACAAAAGG

SEQ ID NO: 554

>18219 BLOOD 1143363.1 AF031425 g2623890 Human galectin 3 (LGALS3) gene, exon 6, and complete cds. 1e-54

5 GATTATATCATGGTATATGAAGCACTGGTGAGGTCTATGTCACCAGAAATTCCCA
GTTTGCTGATTTTCATTGAGTTTTTTAAACCCGATGATNGTACTGCAACAAGTNAGC
ATNNGTCACTGCAACCNAACNNGNGGGGGGGNAGGTNCACCCNNNNNTNTTTTTT
TGAAAGGGTTCCCATTTTCNAANGGGGAAACCGNTNTTTTTCTTCCCTNCCCNGT
TATTATCCAGCTTTGTATTGCAAACAATGACTCTCCTGTTGTTCTCATTGAAGCGT
10 GGGGTAAAGTGGGAGGGCAACATCATTCCCTCTTTGGGAAATCTAAGGCAATTC
TGTTTGCATTGGGGC

SEQ ID NO: 555

>18229 BLOOD 400534.5 L22342 g402204 Human nuclear phosphoprotein mRNA, complete cds. 0

15 GCCCAGCCTCCTCACTAGCACTGTGCAAGTGGCCAGTGACAACCTGATCCCCCAA
ATAAGAGATAAAGAAGACCCTCAAGAGATGCCCCACTCTCCCTTGGGCTCTATGC
CAGAGATAAGAGATAATTCTCCAGAACCAAATGACCCAGAAGAGCCCCAGGAGG
TGTCCAGCACACCTTCAGACAAGAAAGGAAAGAAAAGAAAAAGATGTATCTGGT
20 CAACTCCAAAAAGGAGACATAAGAAAAAAAGCCTCCCAAGAGAGATCATTGATG
GCACTTCAGAAATGAATGAAGGAAAGAGGTCCCAGAAGACGCCTAGTACACCAC
GAAGGGTTCACACAAGGGGGCAGCCTCAGCTGGGCATGGCATCCAAGAGAAGCTCC
AAGTGGTGGATAAGGTGACTCAAAGGAAAGACGACTCAACCTGGAAGTCAAGAGG
TCATGATGAGGGTCCAAAAGGCAAGAACTAAATGTGCCCGAAAGTCCAGATTGA
25 AAGAAAAAGAAAAAGGAGAAAGATATCTGTTCAAGCTCAAAAAGGAGATTTCAG
AAAAATATTCACCGAAGAGGAAAACCCAAAAGTGACACTGTGGATTTTCACTGT
TCTAAGCTCCCCGTGACCTGTGGTGAGGCGAAAGGGATTTTATATAAGAAGAAA
ATGAAACACGGATCCTCAGTGAAGTGCATTCGGAATGAGGATGGAAGTGGTTA
ACACCAAATGAATTTGAAGTCTGAAGGAAAAGGAAGGAACGCAAAGAACTGGAA
30 ACGGAATATACGTTGTGAAGGAACGACCCTAGGAGAGCTGCTGAAGAGTGGACT
TTTGCTCTGTCTCCAAGAATAAATCTCAAGAGAGAGTTAAATAGCAAGTGAATT
TCTACTACCCTCTCAGTCACCATGTTGCAGACTTTCCCTGTCTGGAGGCTCACCTT
AGAGCTTCTGAGTTTCCAAGCTCTGAGTCACCTCCACATTTGGGCATGGCATCTT
CAAAACAATTAATTTGCATAGTTAATTTGGGATGGGGAAGCAAATGACTCTAAA
35 ATAAATCTCAAGAGAGAGTTCAATAGCAAGTGAATTTCTACTACCCTCTCAGTCA
CCATGTTGCAGACTTTCCCTGTCTGGAGGCTCACCTTAGAGCTTCTGAGTTTCCAA
GCTCTGAGTCACCTCCACATTTGGGCATGGCATCTTCAAAACAATTAATTTGCAT
AGTTAATTTGGGATGGGGAAGCCAATGACTCTTAAAT

40 SEQ ID NO: 556

>18298 BLOOD 406471.1 X52638 g35502 Human mRNA for 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase (EC 2.7.1.105, EC 3.1.3.46).

0TATTTTCATACGACTCACTATAGGGAATTTTCGCCCTCGAACGGAATTCGGCACGA
GCCCATTTACACTGAAGATCGATCTGAAACTCAGCACCAGCGAAATCCAGAAGT
45 GCCTGTCTCCATGGCTGGTTTTAATTTCCCATTTCTGCAGTGGCTTGTTAATATTA
GTTCTGACCTTTGGGGCAAGGTGAACACATGGTTGGACTGAAGAGAAAAGGCTT
CTGGTGGCTCAGGAACGTCTTTGGCAACTACAACAGCTGATATTTCAACAGAGCA
CATACATCCCCCACTTAACAAGGGTACGTCTCAGCCTTCTCAGGGAACCAACGA
ACACCTCCAGGCTTCCTCTTTGATGCCACCCACTGGACCTGCCTTGGGGGTCTGT

AAATGCAAGAGAACCGAGTGTTGGATAATTAGCGATGGAAGAAAAACCTCTAG
AATAAAAGCATCCATACCCCAAGTTTACCAATTCCCCCACAATGGTGATCATGGTG
GGTTTACCAGCTCGAGGCAAGACCTATATCTCCACAAAGCTCACACGATATCTCA
ACTGGATAGGAACACCAACTAAAGTGTTTAATTTAGGCCAGTATCGACGAGAGG
5 CAGTGAGCTACAAGAACTATGAATTCTTTCTTCCAGACAACATGGAAGCCCTGCA
AATCAGGGAAGCAGTGCGCCCTGGCAGCCCTGAAGGATGTTCACTAATCTCA
GCCATGAGGAAGGTCATGTTGCGGTTTTTGATGCCACCAACACTACCAGAGAAC
GACGGTCACTGATCCTGCAGTTTGCAAAAAGAACATGGTTACAAGGTGTTTTTCAT
TGAGTCCATTTGTAATGACCCTGGCATAATTGCAGAAAACATCAGGCAAGTGAA
10 ACTTGGCAGCCCTGATTATATAGACTGTGACCGGGAAAAGGTTCTGGAAGACTTT
CTAAAGAGAATTGAGTGCTATGAGGTCACTACCAACCCTTGGATGAGGAACTG
GACAGCCACCTGTCCTACATCAAGATCTTCGACGTGGGCACACGCTACATGGTGA
ACCGAGTGCAGGATCACATCCAGAGCCGCACAGTCTACTACCTCATGAATATCCA
TGTCACACCTCGCTCCATCTACCTTTGCCGACATGGCGAGAGTGAACCAACATC
15 AGAGGCCCGCATCGGAGGTGACTCTGGCCTCTCAGTTCGCGGCAAGCAGTATGCCT
ATGCCCTGGCCAACTTCATTCAGTCCCAGGGCATCAGTCCCTGAAGGTGTGGAC
CAGTCACATGAAGAGGACCATCCAGACAGCTGAGGCCCTGGGTGTCCCCTATGA
GCAGTGGAAGGCCCTGAATGAGATTGATGCGGGTGTCTGTGAGGAGATGACCTA
TGAAGAAATCCAGGAACATTACCCTGAAGAATTTGCACTGCGAGACCAAGATAA
20 ATATCGCTACCGCTATCCCAAGGGAGAGTCCTATGAGGATCTGGTTCAGCGTCTG
GAGCCAGTGATAATGGAGCTAGAACGACAGGAGAATGTACTGGTGATCTGCCAC
CAGGCTGTCATGCGGTGCCCTCCTGGCCTATTTCCCTGGATAAAAGTTTCAGATGAGC
TTCCGTATCTCAAGTGCCCTCTGGACACAGTGCTCAAACCTCACTCCTGTGGCTTAT
GGCTGCAAAGTGGAATCCATCTACCTGAATGTGGAGGCCGTGAACACACACCCGG
25 GAGAAGCCTGAGAATGTGGACATCACCCGGGAACCTGAGGAAGCCCTGGATACT
GTCCCAGCCCCTACTGAGCCCTTTCCAAGAAGTCAAACCTGCCTGTGTCCTCATC
GCCTTCCACCTTTAGGAAATGCTATCTTTGCTCTTCTCCTACTCTGCCTTGGCCTC
ACTGAGGCACCCCACTTCCAGTGAAGAAGTCCTCCGCAACTCCCAAACAAGCCTC
GCTTGCTGGCCGCAACCAAGGAGCTATCTAGCTCTGGAGGAACTTTCTTTCTTA
30 ATTCCTATTCTCTGACGAATAAAGACTTACTGCCTACAAGAGG

SEQ ID NO: 557

>18501 BLOOD 201402.1 AL080184 g5262661 Human mRNA; cDNA DKFZp434O071
(from clone DKFZp434O071). 0

35 GTGGGAGTGGAGGAGGAAGAGGCGGTAGGGGGTACGGGGGCTGGTCCCAGAAG
ATGGCGGAGGCGGGGGATTCTGGTAGGTCCTACTTTAGGACAAGATGTGGTAC
CGTTGAAGCGTCAGTCTTTGATTACAGACAGTTGAGCTTTTCAGCTGGGAAGCC
TTTCCATTTTTTTTTTTTAAAGGGCTTTCTGAACCTATGAAACCAGGGCAGAAGGA
GAGACAGAGTCACCGGGGCCCCAAAAGGGGGGCCCATATATTTTCATCTGTCACT
40 AGCCAGAGGGGTGAACTGGAGTGATCGAGGAGTAGGGCTATTTTTAATGGGAGT
ATTTCTGGCATTAGGGTTAAATTTACTTCAGATTGAGAGAAAGGTGACGCTCTTT
CCACCGTGAGTGGTGATGGCAAGCATCTTTTCTTCGGCGTGGGGGGTACCCCTT
GCTGGGGCACGGCTTCTGCTGTGATTGGGTTATTATACCCCTGCATTGACAGACA
TCTAGGAGAACCACATAAATTTAAAAGAGAGTGGTCCAGTGTAATGCGGTGTGT
45 AGCAGTCTTTGTTGGTATAAATCATGCCAGTGCTAAAGTGGAATTCGATAACAAC
ATACAGTTGTCTCTCACTGGCTGCACTATCCATTGGACTGTGGTGGACTTTTGA
TAGATCTAGAAGTGGTTTTGGCCTTGGAGTAGGAATTGCCTTCTTGGCAACTGTG
GTCACTCAACTGCTAGTATATAATGGTGTTTACCAATATACATCTCCAGATTTCTT
CTATGTTCTGTTCTTGGTTACCATGTATATTTTTTGTCTGGAGGCATAACAATGGGAA

ACATTGGTCGACAACTGGCAATGTACGAATGTAAAGTTATCGCAGAAAAATCTC
ATCAGGAATGAAGAAGGCCAAAAAATATCTTTTGTACAGAAAAGCAAGATGAAAA
GGATGTGAAATGGTAGATATACCAACAAAACCTTCAGACTGTAAAATTGCCAGGA
TGCAGTTTTCCCCTTGATTGGCGTGTGTGTATATATGGAATAAATATATATATACA
5 CACACACATATTACTGCAATCTGTGATTGCTTCATCTGTAAATCAGTTGTAAACCT
TTACATATTTGACTTAAATAACTGTAAGATATATATGTACTACATTAAAAAGTGT
TGATTAATAGATGAAATTTTTAAATTAATTTTTTAAAACATGCCATACATTGTATC
ACAATGTTAATGTGCCAAGATATTGTTCCCTGTCATGCAGAGTATAAGAATGCTTT
GAACAATTTGTAGACTTAGTGAAATAAAATAAGAGGAAAGCCAAAAACAAACNT
10 AAAAAAGCATATGGGGAGCTGGTATTTTCTCTTTAGCTTACTGTTGTGCCTTTTT
ATTTTTCTAATCACAGCAGTATGAGTTATGAGTGCCCTAATTTGTGGTTAGTTTCT
AATTTAATGTTGTTTCATAGAGTTTGGAGTGTTTTGATACAGGGTGAAAATGAAC
TTCTGGTTTCAAACCTGCGTTACTGGAGACAGCCCAAAGAGTAATTTTCTGTTTTG
ACAGGTTTTACTGGAAGTATATGTGATGAGCAGAAGAGGTTATCAGCATTAAATT
15 GTTTTGGTTCTAAATTTGGAACAGTATATATAATTAAGTAAGGAACATTAGAG
GATTTAATTAGAATAAATACATGTTTTGGAAATACAGTGACCTCTTGCAAGTGCA
CAAAAGTGCAAAGTGATATTAGCTGTCTCATCTGCAATACAGAATCTCATTGCTTTT
GCACATGGAGCATATAGGAACTCCAAACAGATCACAATGAGGTTTCTAAATCT
GTTGGGTTCTGTCTTCTATTGGGTTCTGTGAAGCAAACCACTGTAGCTTTAGCTGG
20 GTTCAGTCATATGACTCGTTGGTGGAATGCCTAGGTTTTTCATCTTACATGCAGTC
TTGGGGGTGGATGAATACATAATTTCTTATGTATTCGTGTATCCATTAGTGAATA
GTTCAAGTCTGTTTAAGAGTGTATTGAGATGGCATTCTCTGCATGTTAAAGATCTT
AATGGCAACCAGCACCTCTTAAGTATGGTTTAAACATATTCTTAGCTAATTTTTTC
CATTAGTTTTTTGAAATTGGTGGCAGTTGTCTGATGCACAAGGGCAAGATCTTCTG
25 AGTACTCTGGGGTGTGAGTATGTGTGCACACGTGTGTGTTGGAGTGAGTGAGAG
AATGTGTCTGTGCATGTGGCCATGCTTTCCTAGAATGTCAAGTAGATATTTTTACA
CTTTGAGTTTTAAAGCAATTACTATCAGACTGAGATCTTGTATGCCAACTTTAAT
CTGCTTTTATGTTTTTCAGGCTGAAGGTGTGAAAATCCTAAGAGGATTTTCATATTG
AATATGTGTACACAATCTTAACCTATCGTGGTGGAAAACATACTACTATAATTTAT
30 TATTATATCTTCCAGATAATGTTATTCATTTAGAACAAATAAGGTATATTTTTTAG
AATCAACTTTGTAAGCACTATAAAATCTTTAATAAGTTATAAGGTCTATGATGTG
TTTACTTTAAAAATTGCTGTAAAAGCAACACGTATTAAATATGTAATTATCATCT
GGGTAAAGAGTCTGTTTTTCTTCTTTGTGGTAAGTCTTAGAATATGGTACTGTGGA
TTAATCTAATGAAATTAACATATGTGGTTGAAGTTACCAAGAAACGATGAAAAG
35 AACTAAATATAGTNGACCCTTGAACAACAGGAGTTAGGGGCACCACTCCCCAA
CATAGTTGAAAATCCATGTATAACTTTTGACTCCTCCAAAACCTTAACCTACTAATA
GCCTACTCTTGATGGGAAGCCTTACCAATAAGAAACAGTTGATGAACACATATTG
TGTATGGTATATGTATTATATACTGTTTTCTTACAATAGTGTAAAGTCTAAGGAAA
AAAAAAA

40

SEQ ID NO: 558

>18526 BLOOD 238447.3 Incyte Unique

TCCTACAGGTGTATCGTCAGCGAGTGGATCGCCGAGCAGGGCAACTGGCAGGAA
ATCCAAGAAAAGGCCGTGGAAGTTGCCACCGTGGTGATCCAGCCGACAGATGTA
45 TTTGTTTTTAATTTTCAAGTTCTGCGAGCAGCTGTGCCCAAGAATGTGTCTGTGGC
TGAAGGAAAGGAACTGGACCTGACCTGTAAACATCACAAACAGACCGAGCCGATGA
CGTCCGGCCCGAGGTGACGTGGTCCTTCAGCAGGATGCCTGACAGCACCTACCT
GGCTCCCGCGTGTGGCGCGGCTTGACCGTGATTCCCTGGTGCACAGCTCGCCTC
ATGTTGCTTTGAGTCATGTGGATGCACGCTCCTACCATTACTGGTTCGGGATGTT

AGCAAAGAAAACCTCTGGCTACTATTACTGCCACGTGTCCCTGTGGGCACCCGGAC
ACAACAGGAGCTGGCACAAAGTGGCAGAGGCCGTGTCTTCCCCAGCTGGTGTGG
GTGTGACCTGGCTAGAACCAGACTACCAGGTGTACCTGAATGCTTCCAAGGTCCC
CGGGTTTGC GGATGACCCACAGAGCTGGCATGCCGGGTGGTGGACACGAAGAG
5 TGGGGAGGCGAATGTCCGATTCACGGTTTCGTGGTACTACAGGATGAACCGGCG
CAGCGACAATGTGGTGACCAGCGAGCTGCTTGCAGTCATGGACGGGGACTGGAC
GCTAAAATATGGAGAGAGGAGCAAGCAGCGGGCCAGGATGGAGACTTTATTTT
TTCTAAGGAACATACAGACACGTTCAATTTCCGGATCCAAAGGACTACAGAGGA
AGACAGAGGCAATTATTACTGTGTGTGTCTGCCTGGACCAAACAGCGGAACAA
10 CAGCTGGGTGAAAAGCAAGGATGTCTTCTCCAAGCCTGTTAACATATTTTGGGCA
TTAGAAGATTCCGTGCTTGTGGTGAAGGCGAGGCAGCCAAAGCCTTTCTTTGCTG
CCGGAAATACATTTGAGATGACTTGCAAAGTATCTTCCAAGAATATTAAGTCGCC
ACGCTACTCTGTTCTCATCATGGCTGAGAAGCCTGTCGGCGACCTCTCCAGTCCC
AATGAAACGAAGTACATCATCTCTCTGGACCAGGATTCTGTGGTGAAGCTGGAG
15 AATTGGACAGATGCATCACGGGTGGATGGCGTTGTTTTAGAAAAAGTGCAGGAG
GATGAGTTCGCTATCGAATGTACCAGACTCAGGTCTCAGACGCAGGGCTGTACC
GCTGCATGGTGACAGCCTGGTCTCCTGTCAGGGGCAGCCTTTGGCGAGAAGCAG
CAACCAGTCTCTCCAATCCTATTGAGATAGACTTCCAAACCTCAGGTCCTATATTT
AATGCTTCTGTGCATTCAGACACACCATCAGTAATTCGGGGAGATCTGATCAAAT
20 TGTCTGTATCATCACTGTCGAGGGAGCAGCACTGGATCCAGATGACATGGCCTT
TGATGTGTCCTGGTTTGC GGTTGCACTCTTTTGGCCTGGACAAGGCTCCTGTGCTCC
TGCTCTCCCTGGATCGGAAGGGGCATCGTGACCACCTCCCGGAGGGGACTGGAAGA
GCGACCTCAGCCTGGAGCGCGTGAGTGTGCTGGAATTCTTGCTGCAAGTGCATGG
CTCCGAGGACCAGGACTTTGGCAACTACTACTGTTCCGTGACTCCATGGGTGAAG
25 TCACCAACAGGTTCCCTGGCAGAAGGAGGCAGAGATCCACTCCAAGCCCGTTTTTA
TAACTGTGAAGATGGATGTGCTGAACGCCTTCAAGTATCCCTTGCTGATCGGCGT
CGGTCTGTCCACGGTCATCGGGCTCCTGTCTGTCTCATCGGGTACTGCAGCTCCC
ACTGGTGTGTGAAGAAGGAGGTTCAAGGAGACACGGCGCGAGCGCCGACGGCTCA
TGTCGATGGAGATGGACTAGGCTGGCCCCGGGAGGGGAGTGACAGAGGGACGTTT
30 TAGGAGCAATTGGGNCAAGAAGAAGCCAGTGATATTTTTAAACAAAGTGTGT
TACACTAAAAACCAGTCCTCTCTAATCTNAGGTGGGACTTGGCGCTCTCTCTTTTC
TGCATGTCAAGTTCTGAGCGCGGACATGTTTACCAGCACACGGCTCTTCTTCCCA
CGGCACTTTCTGATGTAACAATCGAGTGTGTGTTTTCCCAACTGCAGCTTTTTAAT
GGTTAACCTTCATCTAATTTTTTTCTCCCACTGGTTTATAGATCCTCTGACTTGTG
35 TGTGTTTATAGCTTTTGTTCGCGGGGTGTGGTGAAGGGGTGATGGCATGC
GGAGTTCTTTATCTTCAGTGAGAATGTGCCTGCCCGCCTGAGAGCCAGCTTCCGC
GTTGGAGGCACGTGTTCAAGAGAGCTGCTGAGCGCCACCCTCTACCCGGCTGACA
GACAACACAGACCTGTGCCGAAGGCTAATTTGTGGCTTTTACGACCCTACCCAC
CCCCTGTTTTTCAGGGGTTTAGACTACATTTGAAATCCAACTTGGAGTATATAAC
40 TTCTTATTGAGCCCAACTGCTTTTTTTATTTTTATGGGATTTTGGGCCCTTTTCCAT
TTCTTTTGTATTTGTTTTCTGTGAGAGCACTGAAATGGCGGCCCTGGAATCTACAA
TTTGGCTCTCCACTGAGCACCTTATCTTGCCACCTTAGCCTTAAGAATGAATATGA
AGAAAAATACACAGCCACCTCTGTCCAGGGCAGTAAGAAGGGCTGCAAGGAAG
GGGAGGATGGGGACAAGGAAAGGATCAGATACCTGCTCCAGTAGTTGTGAGGCC
45 ACTGTGTCTCAGGGGACTCCAGGAAGAGCAGAAGAGGGATCCACGAAGTTATT
TTTATGCAGCTGGGGCCAGGAGGGTCAGAGTGGTGCCAGGTGCAAGTTAGGCTA
AAGAAGCCACCACTATTCCTCTGCTCTTGCCATTGTGGGGGGCAAAGGCATTGG
TCACCAAGAGTCTTGCAGGGGGACCCACAGATATGCCATGTCCTTCACACGTGCT
TGGGCTCCTTAACCTGAAGGCAAATTGCTACTTGCAAGACTGACTGACTTCAAGG

AATCAGAAATTACCTAGAAGCACCATGTTTTTCTATGACCTTTTCAGTCCTTCAG
GTCATTTTAAAGGTCCACTGCAGGGGGTTAGTGAGAAAGGGTATACTTTGTGGTAT
GTTTTGCTTTCCTAATAGGGACATGAAGGAAACCCAGCAATTTGCTGTTATGTGA
ATGGCCTGTAGAGCAGAGTCAAGAGCGGTGTGCTTTGCCCGACTGCTCCCATCAG
5 GAATAGGAGAGTAGACAGAGATCTTCCACATCCCAGGCTTCTGCTGCTGCTTTAA
AAGCTCTGTCCTTGGAGCCTCCCGCTCCCTGAAGTGTCTCGCCCCCTGCACAGCA
CTGGCCTTTCGGAAGCATCCCAGTAGGGTTTTCTGAGGCTCGCTGGTGACTCATG
CCCTAATTGCAATCCTCTGCTTTTATCTTGACTTTGAAGGATCTAACACTGCTCTC
TCTTCCAAAGGGGAAAAAAAGATTCATTTGTTTTGAGCAATAAACTAATAACAAA
10 ATGATGGCCATTTCATGTGCAGCTCTTTGTACCATGGGCCGGATGAGTTGTGCTC
CTCCTGGCTCACCATTTCCTCCCTGCTCCCCACAGCCGGTTCTGCACTTATCACCG
AGTCGCCCCCTGGAAGCAGATTCCCATTGAGTTTTCCCAACCAAGGGGACCATGCA
CATGGTAGAAACATTAGATTCTGCATTGACAGTAGCCTTTCCTTGGGCCCCGGGCC
TGTGGTGGGAAGACGGGCAACAAGTATACCCACCAAGGGCCTGAGTGACTAGAG
15 GAAGAGGACGAGGCCTTGTGGGCACTAGATTTGGGTATTTTCTGCATGTCATAAC
ATATCCTAACTGCTATTTTCAAGAGAGGCAGCTTGTAGGTGATTGTACAAGTGAGA
ATTAAAGAGAGAACAGATATTTAAACAGGTGCTGTATTAGTAACAGCCAGTGCC
CTTTCAGCCCTTGCATCTATTAAGAGGAGATTCAGGATTTTATTGGCACAGGCC
TTCTTAGTAGGAAGAAAGGGTGCTTAGCTTTGGACCTGACCGGGTGTGTGTA
20 CCATGGACTGAGTCACAGCAGACACTCGATGGTGGTAAATGTGACGGGTGCTTA
CACACTGTACCTTTTCCTTTCATACTGATGCTGCAGTTCAGGGCTGGAGTTGTTAA
GGGATTTGACCTCCACCCACCTGCCCCATGTCGGTGGGCTGCCCAAGCTGCATGT
GACCTGAGGGGCTGGCAGGAAGGGGCGAGAAATCCGAGGGCATTTGTACCAAGGAC
CTAGTTTCTTCTAGGGATATAAAATTTCCAGGAATGTGTATTTTAAATGTGGTGAG
25 ATGCACTCTTTTGTGTGACCAATAGGGCTCCCCACCCACCCCTGCGACAAGTG
CTCTTCTAGAACAGGTTCTACCAGCAGCACTGGTGTGAATGAAAGAGAGACCC
AGCCGCGTCTCACACAGGTGGAATTGCACTTCTTAACAAAAAGGAACCTTATAAA
AGTTTGGGATTTTTTTTCTAATCATAAAAATAGCCCCAGAAAGAGCCTAAGCTA
TGTTTCAGATAGAAGCCTCGAAATTCCTGTGAATTGTTTACTTTATGATGTTTACAT
30 ACACGTTTCACTTTGAAAAAAATGCAAATCGACTTTTAAACAACTGTTGAGATG
TTTCATGGGACAGTAGAACTCTGACTCACCAACTGGGCTAAATTTTAATTTAAAA
ATGTATTTATTTGAGTGTCTTTCCCCCCTCACCTCACCATCTGAGGGGCTCCCT
GAGATCTTGGTAGAGGAGGCCCTCCTGCCCAGACCTTCGTTTGTTCCTCCGGTG
GCCCTTGCTTCTTGCTTTGCAGACTGCCTGCAGCCATGATTTTGTCACTGACATCT
35 GTGAGCCAAAGACTGAGCCTTTTTTGGCAGGAATAATAAGCAATACTACACA
TGCTACTTTCAGAAAACCTTTTTTTTAGCTTCACCGATGACAACAGAGGAAGAAGG
GAACTGGGATTTGGGTAAGTTCTCCTCCACTGTTTGACCAAATTCTCAGTGATAA
ATATGTGTGCAGATCCCTAGAAGAGAAAACGTTGACTTTGTTTTTAAGTGTGGCA
CATAAGGATCTGCAGAATTTTCCGTAGACAAAGAAAGGATCTTGTGTATTTTGT
40 CCATATCCAATGTTATATGAACTAATTGTATTGTTTTATACTGTGACCACAAATAT
TATGCAATGCACCATTTGGGTAAAGTTCTCCTCCACTGTTTGACCAAATTCTCAGTG
ATAAATATGTGTGCAGATCCCTAGAAGAGAAAACGTTGACTTTCTTTTTAAGTGT
GGCACATAAGGATCTGCAGAATTTTCCGTAGACAAAGAAAGGATCTTGTGTATTT
TTGTCCATATCCAATGTTATATGAACTAATTGTATTGTTTTATANTGTGACCACAA
45 ATATTATGCAATGCACCATTTGTTTTTTATTTCAATTAAGGAAGTTTAATTTAA

SEQ ID NO: 559

>18550 BLOOD 234287.1 Incyte Unique

AAAGAAAGAAAAAGAAAAGCTGCAGATAACCCTATACATTAATACTGGTATCTCG
 AGGTGACTCTTCTGACCAAGGGTGGTTAAGTGACACATAGAAGCTTTTCTAAGAGA
 AGACAGACAAGTTGACAGGCATGCCTTGTACTCAGCTGTGTTTCATGTGGTGGTCT
 GTGGAAAGAAAAGAAGACTCATTGGAATGAAGCTGTCCCTTTCCAAGCAGTC
 5 TCTGGTGCTTTTCTTCTCTCAAAATGGATCCGATAAATATTTGAATAGAGCAGATT
 GTAGAATGTCGTGCTGTCACCAGAAAGCTGCTGTTTTGGGTTCTGCATTGAGCCA
 AATATGTAGAGGACCTACCAAGCCCCTGAGGGGACTAGGTTTTTCATGTCTCTAGT
 CATACCTAGAATGTTCTGAGCCGTCTGAGGGCCTTCATGCCGGCAGCAGCTAGCA
 AAGCCAGAAAGCAAGTCTAACAGGATCTAAGATGACCATCAGGAGAAGGAGTTT
 10 GAGACTGTGTATGCAACCCCAATAGACCCCTTTTACTCTGATCTGGAGAATGT
 ATCTGGCTTCATATTTTCAAGTCACATGTCTCTCAGACCCCTGGGATTGAGAACC
 AAGGCCACAAATCATAGGCATGAAGCACTTTCTTAAGACTGACCTAACGCTGGA
 TTATTTCCCGTCCAATGCCTGCATGCTGCTTGAATTGCTCCACCCACACCTCCATG
 ACCAAGGGCGCCAGAGTGCTGCAACTGGGGCGTGGGCGCTCTCTGCTTTTCTG
 15 TCTGACTCTGACAAGTCCTCCCTCACTGAATGTAGAATCGTTGCCAAGTTTCTGA
 GAAGTGTGATTCCCTGTTAACATGGATATCAGTTCTGCCTCACATTTCCCACTTG
 AGGTTGAGGCGTACTGGAGACAACACCTCAGACCATCTGAACCCCATCAGTGGA
 CGAAAATGGGGCTGTTAATACTCTAAAAGCCATACTAAAAATGCTCTGAGGG
 AACTGGCTAAGAATAGTGGGCCTGGTGATTGTCTATCACGCAAGGCTTTGTTTTG
 20 TACTGTTGAGAAATCTGTCACCTTTCTGCCTGCCCTTGTTTCCTGAATGAAATGCT
 TCTGGGGTTATTTATGAAAGGAGTGATCCTGGGGCAGGCAGGAGGCAGTGGGCT
 TCTGCTCCTTGAAGTTATTACTGATCTTGAAGCTTCTCTTTGGCTACCTTTAGAC
 AAAGAATACGCCAATCAATACTTGGGGCTCTAAGTTTACAATTGATATTTATTT
 GTATCATCTCTTTGTCTAGGAATGTAAAAGTGATTCTAAACTAAGATGTGTAATA
 25 AAAATCAATCAGATTTATTGTACCTACAAAAA

SEQ ID NO: 560

>18555 BLOOD 200000.3 AF054175 g3341993 Human mitochondrial proteolipid 68MP
homolog mRNA, nuclear gene encoding mitochondrial protein, complete cds. 0

30 GCTCAATAAACGTTTATTAAGCAGTAGAATAACAAGTTAGTGCCTGGATCCTGATC
 ACCGAGTTGGCTGCAGATTTGTGGTGGCTTCTGAGCCGTCTGTCCTGCGCCAAGA
 TGCTTCAAAGTATTATTAACAAACATATGGATCCCATGAAGCCCTACTACACCAA
 AGTTTACCAGGAGATTTGGATAGGAATGGGGCTGATGGGCTTCATCGTTTATAAA
 ATCCGGGCTGCTGATAAAAGAAGTAAGGCTTTGAAAGCTTCAGCGCCTGCTCCTG
 35 GTCATCACTAACCAGATTTACTTGGAGTACATGTGAAAGAAAACGTCAGTCTGCC
 TGTAATTTTCAGCAAGCCGTGTTAGATGGGGAGCGTGGAACGTCAGTGTACACTT
 GTATAAGTACCGTTTACTTCATGGCATGAATAAATGGATCTGTGAGATGCACTGC
 TACCTGGTACTGCTTTCAGTGTGTTCCCCCTCAGCCCCTCCGGCGTGTGAGGCATA
 CTCTGAGTAGATAATTTGTCATGCAGCGCATGCAATCAGAATCTCACTGAGCCAC
 40 CCATCATTGTGAAATAATTACCTCAGTTGTACAGGACTTGGTGATCAGGATCCAG
 GCACTCACTTGTATTCTACTGCTCAATAAACGTTTATTAACCTTGATCCTGCTACT
 TAAA

SEQ ID NO: 561

45 >18576 BLOOD 481208.4 U60207 g1477790 Human stress responsive serine/threonine
 protein kinase Krs-2 mRNA, complete cds. 0
 GCGGGGCGGGCTCAGGAGGTCCGCGGGAGGATGGAGCAGTGAGCGGGTCTGGG
 CGGCTGCTGGCAGCGCCATGGGAGACGGTACAGCTGAGGAACCCGCCGCGCCGG
 CAGCTGAAAAAGTTGGATGAAGATAGTTTAACCAAACAACCAGAAGAAGTATTT

GATGTCTTAGAGAACTTGGAGAAGGGTCCTATGGCAGCGTATACAAAGCTATT
 CATAAAGAGACCGGCCAGATTGTTGCTATTAAGCAAGTTCCTGTGGAATCAGACC
 TCCAGGAGATAATCAAAGAAATCTCTATAATGCAGCAATGTGACAGCCCTCATGT
 AGTCAAATATTATGGCAGTTATTTTAAGAACACAGACTTATGGATCGTTATGGAG
 5 TACTGTGGGGCTGGTTCTGTATCTGATATCATTTCGATTACGAAATAAAACGTTAA
 CAGAAGATGAAATAGCTACAATATTACAATCAACTCTTAAGGGACTTGAATACCT
 TCATTTTATGAGAAAAATACACCGAGATATCAAGGCAGGAAATATTTTGCTAAAT
 ACAGAAGGACATGCAAAACTTGCAGATTTTGGGGTAGCAGGTCAACTTACAGAT
 ACCATGGCCAAGCGGAATACAGTGATAGGAACACCATTTTGGATGGCTCCAGAA
 10 GTGATTGAGGAAATTGGATACAACCTGTGTAGCAGACATCTGGTCCCTGGGAATA
 ACTGCCATAGAAATGGCTGAAGGAAAGCCCCCTTATGCTGATATCCATCCAATGA
 GGGCAATCTTCATGATTCTTACAAATCCTCCTCCACATTCCGAAAACCAGAGCT
 ATGGTCAGATAACTTTACAGATTTTGTGAAACAGTGTCTTGTAAGAGCCCTGAG
 CAGAGGGCCACAGCCACTCAGCTCCTGCAGCACCCATTTGTCAGGAGTGCCAAA
 15 GGAGTGTCAATACTGCGAGACTTAATTAATGAAGCCATGGATGTGAAACTGAAA
 CGCCAGGAATCCCAGCAGCGGGAAGTGGACCAGGACGATGAAGAAAACCTCAGA
 AGAGGATGAAATGGATTCTGGCACGATGGTTCGAGCAGTGGGTGATGAGATGGG
 CACTGTCCGAGTAGCCAGCACCATGACTGATGGAGCCAATACTATGATTGAGCA
 CGATGACACGTTGCCATCACAACCTGGGCACCATGGTGATCAATGCAGAGGATGA
 20 GGAAGAGGAAGGAACATGAAAAGAAGGGATGAGACCATGCAGCCTGCGAAAC
 CATCCTTTCTTGAATATTTTGAACAAAAAGAAAAGGAAAACCAGATCAACAGCTT
 TGGCAAGAGTGTACCTGGTCCACTGAAAAATTCTTCAGATTGGAAAATACCACA
 GGATGGAGACTACGAGTTTCTTAAGAGTTGGACAGTGGAGGACCTTCAGAAGAG
 GCTCTTGGCCCTGGACCCCATGATGGAGGAGGAGATTGAAGAGATCCGGCAGAA
 25 GTACCAGTCCAAGCGGGAGCCCATCCTGGATGCCATAGAGGCTAAGAAGAGACG
 GCAACAAAACCTTCTGAGCAAGGCCAGGCTGTGAGGGGCCCCAGCTCCACCCAGGC
 TTTGGGTGAATTCTGGATGGCTTGCTCATGTTTGTAGCCAGCACTTCTGCTCTG
 TCGTCTCTCCACAGCACCTTTGTGAACTCAGGAATGTGCGCCAGTGGGAAGGGCT
 CTCTTGACAGTCAGCGTGCCATCTTGATGTGTGTATGTACATTGGTCAGGTATATT
 30 ATCTCAAAGGATTTATATTGGCGCTTTTAACTCAGAGTTTAAACCCAGGAACA
 GAGACTCCTAGTTGAGTGATAGCTGGGAAAGTTTACATTGTCTGTTTTCTTCTC
 CCAATAGCTTTCAATTGTTCTTTCTGGAAGACTTTTAAAAAATATAAATATGCA
 TATATATATATAAATTATAAAAAATACTTATTAATACAAAAAAGATCTTTAATTA
 AGGAGTGCAAGCTTATTCCATTTAGTGAGTGTT

SEQ ID NO: 562

>18601 BLOOD 217961.1 Incyte Unique

AGATGTTCCAGGAGTAGAATTCCTGACTGCTGTGTGAAAGTGAAGTGTACTCCA
 TCTCTGAAACATATCTGAGAAACGGGGCAGAAAACCAGTGTAAGTGTCTCGTGG
 40 TGAAATTATTGAACATTGAAGTGTGAGGCTTGTCTAAGAGCACGTCACCTCCCT
 TGACACAGATTCTGCATGTCCTTCCCTCTGGTAGGGATCCTCCAGTTCGGTTTCTC
 AGGCGAAGTAACCAGAGGTTCCAGTCTGCTCTTGTCTTCTGGGAGGAAGACAGA
 GCACCTAGTAATAGATTCCAGGGTACTGATTGGCACCACACATGACTCAGAGG
 GGACCTAAGCCCATCAGCAGGCTGCTCTAAGGACCTACCTCAGGGCACTCAGAC
 45 AGCCTACCAATCAGAGGCTCAGGAGAGGGTTTTCTCACTGCCCTCCTTGTGTG
 CACTGGTTTTCTGTTTAGAGCAGCATTTAGCAGCACACACCTCAGATGTAGA
 GGATGAACCTCTCTTATATGAAATAAAATGATGTCCAGCAAAANANAAA

SEQ ID NO: 563

>18628 BLOOD GB_T96731 gi|735355|gb|T96731|T96731 ye51f02.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:121275 5' similar to gb:M24922_cds1 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DX BETA CHAIN (HUMAN);,
mRNA sequence [Homo sapiens]

5 NTTCGGCACGGNGGCTCTGCAGATCCCTGGAGGCTTTTGGGCAGCAGCTGTGACC
GTGATGCTGGTGATGCTGAGCACCCAGTGGCTGAGGCAGANGACTTTCCCAAG
GATTNTTGGTCCAGTTTAAGGGCATGTGCTACTTCACCAACGGGACAGAGCGCG
TGGNGGTGTGGCCAGATACATCTATAACCGCGAGAGTACGGGCGCTTCGACAGC
10 GACGTTGGGGAGTTCCAGGCGGTGACCGAGCTGGGGCGNACATNCGAGGACTGG
AACAACATAAGGACTTCTTTGAGCAGGAGCGNGCCGGNTNGGACAAGGTGTGC
AGACACAAC

SEQ ID NO: 564

15 >18649 BLOOD 205772.16 Incyte Unique

ACGATTCTTAGATGACATTTTCTCTTTCCCCTTTTTTCCCCCTAACCTCAATCTAGG
CTCACTTATCTAAAGAATATGAGGAGGCTAATTTTCAGAGCTATATGTGCGAGATA
ACTGCCACCCTTTCAAAGCCACTGTGTTGGTTTGGATTTCAGCTTCCAATGTGGATC
TTCATGTCTTTTGCTCTCCGGAATTTAAGCACGGGGGCAGCACATTCAGAAGCAG
20 GTTTTTCTGTTTCAGGAACAGTTAGCTACTGGTGGAATTCTGTGGTTTCCTGACCTC
ACTGCACCCGACTCCACTTGGATTCTGCCTATCTCTGTTGGCGTCATCAATTTGTT
AATAGTGGAGATTTGTGCTCTACAAAAAATTGGAATGTCTCGTTTTTCAGACGTAT
ATTACGTACTTTGTCCGTGCAATGTGGGTGTTGATGATACCAATTGCTGCAACGG
TACCCTCATCAATTGTTCTCTACTGGTTATGCTCCAGCTTCGTGGGCCTTTCAAG
25 AATTTGCTGCTGCGTTCTCCTGGATTTCCGCAACTTTGCCGAATACCATCGACCAA
GTCAGATTCAGAACTCCTTATAAAGACATATTTGCTGCCTTTAATACCAAGTTC
ATTTCAAGAAAATGACATATTTTCCAATAATTTTGAAACAGTTGCAGGAGTCACT
ATCATCTAAATGTATTTAGACTTAGAAATTCAGATGTTACTTGATTTCCTTTTATT
TATAGTCAATTGTTCTCTACTGGTTATGCTCCAGCTTCGTGAGCCACTGTGCCAG
30 CTGAGATGGTTCTTATTATTTTGGAGGTGGAGAGGATTTTAGACCTCTTTGAGCA
TCTGAAAAAAGGCTATATATGTATGGTTTTCTCTTCAGAAAAATCTTAAGACTCA
CAATACGGGGACTTCCTTGTTACCAGGAAGATTTTCTGGCAATTCCTAGTTAATA
AATCTTATTCTAATGGAACATACATTGATCTTGAGTTAATGCGTGGTTGAAAAAA
AAAGCGGGGGCAACTTGAAATATATGCAGTAAAGTAGTCCATGCATACAAGTCC
35 CTAACATGGTAGATGATGTTGCCTCCCGGCCCTGCTCAGAAAGAATACAAAAAG
TGTACATTCCTTTTTCTATAATTTAAGAAGTCTGGAATACAGAGTGTAACACTGT
GTACTGCTAGCACCCAAAGTGGAATACTTAAGCATTTCAGATTGTTTAGTCAAAG
AAGAAAACCAGAAGGGCAGTTGCCTATTGAGGTGATTTTAAACCTGTTTATTTGT
AAGGATTAAGTACCCTAATAGGCTTAACTATGATAGAGGTTTAATACAGAAAA
40 AATTGACAGGTATTATAAATTGTGGATCCAGTTACTTGCTTATTTAATTTGTAAAG
AGGTAAAATTAGCTCTGGTTGAGATATCAAGTATGGCAGGTATTTGAGAAGGCT
ATAAATCATAATTTTCATTTAGTTAAAATATGGACCTGATTCTGGGAAACCCTAT
CATTCCATCTCAATGTTTTACAATAAAATAAAAACTAAAGT

45 SEQ ID NO: 565

>18713 BLOOD GB_T98559 gi|748296|gb|T98559|T98559 ye70f11.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:123117 3', mRNA sequence [Homo sapiens]

AACACTTTAATATTNATGGTGTATCACATAAAAAACAAAGTCATATACTTTTGCA
 TTAATCAAAAAATAGCAAATCCATATAATGGCAAAATCAGGAAAAAAATTCTAG
 TATTTCCACAAAATACATAATGTCTTACAGATGATTATGTGAACTTTAAATGTCT
 GCAGCCCTACAGAGCTTTTGTGTCANTTGAAAAACAAAAAAATCCCAACACAG
 5 GATGTTCAAAAAGCCTAATTCATAAAANGACANTTTATTCCNATGTTTAATATAG
 TGTTTTTTAGGATGGTANCCATAAGTCATGCAACNAGCTCTGTAAANCCAAAAC
 CAAAACCAAGNAACCTACGGATGTCTGGCTGCGGGTTTA

SEQ ID NO: 566

10 >18817 BLOOD Hs.93213 gnl|UG|Hs#S1972075 Human DNA sequence from clone RP1-
 291J10 on chromosome 6p21.2-21.33 Contains BAK1 (BCL2-antagonist/killer 1) gene,
 ESTs, STSs, GSSs and a CpG Island /cds=(249,884) /gb=Z93017 /gi=5921377 /ug=Hs.93213
 /len=2136
 GCCGGGTGCCGCTGGCACCTCTATGATCACTGGAGTCTCGCGGGTCCCTCGGGCT
 15 GCACAGGGACAAGTAAAGGCTACATCCAGATGCCGGGAATGCACTGACGCCCCAT
 TCCTGGAAACTGGGCTCCCACTCAGCCCCCTGGGAGCAGCAGCCGCCAGCCCCCTCG
 GGACCTCCATCTCCACCCTGCTGAGCCACCCGGGTGGGCCAGGATCCCGGCAGG
 CTGATCCCGTCTCTCACTGAGACCTGAAAAATGGCTTCGGGGCAAGGCCCAGGTC
 CTCCCAGGCAGGAGTGCGGAGAGCCTGCCCTGCCCTCTGCTTCTGAGGAGCAGGT
 20 AGCCCAGGACACAGAGGAGGTTTTCCGCAGCTACGTTTTTACCGCCATCAGCAG
 GAACAGGAGGCTGAAGGGGTGGCTGCCCTGCCGACCCAGAGATGGTCACCTTA
 CCTCTGCAACCTAGCAGCACCATGGGGCAGGTGGGACGGCAGCTCGCCATCATC
 GGGGACGACATCAACCGAGGCTATGACTCAGAGTCCAGACCATGTTGCAGCAG
 CTGCAGCCCCACGGCAGAGAATGCTATGAGTACTTCACCAAGATTGCCACCAGC
 25 CTGTTTGAGAGTGGCATCAATTGGGGCCGTGTGGTGGCTCTTCTGGGCTTCGGCT
 ACCGTCTGGCCCTACACGTCTACCAGCATGGCCTGACTGGCTTCCTAGGCCAGGT
 GACCCGCTTCGTGGTCGACTTCATGCTGCATCACTGCATTGCCCGGTGGATTGCA
 CAGAGGGGTGGCTGGGTGGCAGCCCTGAACTTGGGCAATGGTCCCATCCTGAAC
 GTGCTGGTGGTTCTGGGTGTGGTTCTGTTGGGCCAGTTTGTGGTACGAAGATTCTT
 30 CAAATCATGACTCCCAAGGGTGCCCTTTGGGGTCCCGGTTTCAGACCCCTGCCTGG
 ACTTAAGCGAAGTCTTTGCCTTCTCTGTTCCCTTGCAAGGGTCCCCCCTCAAGAGT
 ACAGAAGCTTTAGCAAGTGTGCACTCCAGCTTCGGAGGGGCCCTGCGTGGGGGC
 CAGTCAGGCTGCAGAGGCACCTCAACATTGCATGGTGCTAGTGGGCCCTCTCTCT
 GGGCCCAGGGGCTGTGGCCGTCTCTCCCTCAGCTCTCTGGGACCTCCTTAGCCC
 35 TGTCTGCTAGGCGCTGGGGAGACTGATAACTTGGGGAGGCAAGAGACTGGGAGC
 CACTTCTCCCCAGAAAGTGTTTAACGGTTTTAGCTTTTTATAATACCCTTGTGAGA
 GCCCATTTCCACCATTTCTACCTGAGGCCAGGACGTCTGGGGTGTGGGGATTGGTG
 GGTCTATGTTCCCCAGGATTCAGCTATTCTGGAAGATCAGCACCTAAGAGATGG
 GACTAGGACCTGAGCCTGGTCCTGGCCGTCCCTAAGCATGTGTCCCAGGAGCAG
 40 GACCTACTAGGAGAGGGGGGCCAAGGTCCTGCTCAACTCTACCCCTGCTCCCAT
 CCTCCCTCCGGCCATACTGCCTTTGCAGTTGGACTCTCAGGGATTCTGGGCTTGG
 GGTGTGGGGTGGGGTGGAGTCGCAGACCAGAGCTGTCTGAACTCACGTGTCAGA
 AGCCTCCAAGCCTGCCTCCCAAGGTCCTCTCAGTTCTCTCCCTTCTCTCTCTTA
 TAGACACTTGCTCCCAACCCATTCACTACAGGTGAAGGCTCTCACCCCCATCCCT
 45 GGGGGCCTTGGGTGAGTGGCCTGCTAAGGCTCCTCCTTGCCCAGACTACAGGGCT
 TAGGACTTGGTTTGTATATCAGGGAAAAGGAGTAGGGAGTTCATCTGGAGGGTT
 CTAAGTGGGAGAAGGACTATCAACACCACTAGGAATCCCAGAGGTGGGATCCTC
 CCTCATGGCTCTGGCACAGTGTAATCCAGGGGTGTAGATGGGGGAACTGTGAAT
 ACTTGAACCTCTGTTCCCCCACCTCCATGCTCCTCACCTGTCTAGGTCTCCTCAGG

GTGGGGGGTGACAGTGCCTTCTCTATTGGGCACAGCCTAGGGTCTTGGGGGTCAG
GGGGGAGAAGTTCTTGATTGAGCCAAATGCAGGGAGGGGAGGCAGATGGAGCCC
ATAGGCCACCCCTATCCTCTGAGTGTGTTGGAAATAAACTGTGCAATCCCCTCA

5 SEQ ID NO: 567

>18899 BLOOD 285978.2 U43431 g1292911 Human DNA topoisomerase III mRNA,
complete cds. 0

GGCGGCTGCGGCACGGGAAAGGCTCAGTGACTGAAGCTCCAAAGGCCAGCAGGC
TGGTGGGGACGTGACCGAAGCGAGGCTCTGGTTCCCTTTCGGTGGGCGCCATTTG
10 AGCCTCATCTCTGGCTTCCCCAGGATGCGCCGGCAGCCGGGGAGCGGCTCCGGG
CGCGAGGTCTGAGGATGATCTTTCCTGTGCGCCGCTACGCGCTCCGGTGGCTGCG
ACGGCCCCGAAGACCGTGCCCTTTTCCCGCGCCGCCATGGAGATGGCCCTCCGAGGC
GTGCGGAAAGTCCTCTGTGTGGCCGAAAAAACGACGCGGCCAAGGGGATCGCC
GACCTGCTGTCAAACGGTCGCATGAGGCGGAGAGAAGGACTTTCAA AATTCAAC
15 AAGATCTATGAATTTGATTATCATCTGTATGGCCAGAATGTTACCATGGTAATGA
CTTCAGTTTCTGGACATTTACTGGCTCATGATTTCCAGATGCAGTTTCGAAAATGG
CAGAGCTGCAACCCTCTTGTCTCTTTGAAGCAGAAATTGAAAAGTACTGCCAG
AGAATTTTGTAGACATCAAGAAAACCTTTGGAACGAGAGACTCGCCAGTGCCAGG
CTCTGGTGATCTGGACTGACTGTGATAGAGAAGGCGAAAACATCGGGTTTGAGA
20 TTATCCACGTGTGTAAGGCTGTAAAGCCCAATCTGCAGGTGTTGCGAGCCCGATT
CTCTGAGATCACACCCCATGCCGTCAGGACAGCTTGTGAAAACCTGACCGAGCCT
GATCAGAGGGTGAGCGATGCTGTGGATGTGAGGGAAGGAGCTGGACCTGAGGATT
GGAGCTGCCTTTACTAGGTTCCAGACCCCTGCGGCTTCAGAGGATTTTTCCTGAGG
TGCTGGCAGAGCAGCTCATCAGTTAGGGCAGCTGCCAGTTCCCCACACTGGGCTT
25 TGTGGTGGAGCGGTTCAAAGCCATTGAGGCTTTTGTACCAGAAATCTTCCACAGA
ATTAAAGTAACTCATGACCACAAAGATGGTATCGTAGAATTCAACTGGAAAAGG
CATCGACTCTTTAACCACACGGCTTGCCTAGTTCTCTATCAGTTGTGTGTGGAGG
ATCCCATGGCAACTGTGGTAGAGGTCAGATCTAAGCCCAAGAGCAAGTGGCGGC
CTCAAGCCTTGGACACTGTGGAGCTTGAGAAGCTGGCTTCTCGAAAGTTGAGAAT
30 AAATGCTAAAGAAACCATGAGGATTGCTGAGAAGCTCTACACTCAAGGGTACAT
CAGCTATCCCCGAACAGAAACAAACATTTTCCAGAGACTTAAACCTGACGGTG
TTGGTGGAACAGCAGACCCCCGATCCACGCTGGGGGGCCTTTGCCAGAGCATT
TAGAGCGGGGTGGTCCCACCCACGCAATGGGAACAAGTCTGACCAAGCTCACC
CTCCCATTCACCCACCAAATACACCAACAACCTTACAGGGAGATGAACAGCGAC
35 TGTACGAGTTTATTGTTTCGCCATTTCTCTGGCTTGCTGCTCCAGGATGCTCAGGGG
CAGGAGACCACAGTGGAGATCGACATCGCTCAGGAACGCTTTGTGGCCCATGGC
CTCATGATTCTGGCCCGAAACTATCTGGATGTGTATCCATATGATCACTGGAGTG
ACAAGATCCTCCCTGTCTATGAGCAAGGATCCCACTTTCAGCCCAGCACCGTGGA
GATGGTGGACGGGGAGACCAGCCCACCCAAGCTGCTCACCGAGGCCGACCTCAT
40 TGCCCTCATGGAGAAGCATGGCATTGGTACGGATGCCACTCATGCGGAGCACAT
CGAGACCATCAAAGCCCGGATGTACGTGGGCCTCACCCAGACAAGCGGTTCT
CCCTGGGCACCTGGGCATGGGACTTGTGGAAGGTTATGATTCCATGGGCTATGAA
ATGTCTAAGCCTGACCTCCGGGCTGAACTGGAAGCTGATCTGAAGCTGATCTGTG
ATGGCAAAAAGGACAAATTTGTGGTTCTAAGGCAGCAAGTGCAGAAATACAAGC
45 AGGTTTTTCATTGAAGCGGTGGCTAAAGCAAAGAAATTGGACGAGGCCTTGGCCC
AGTACTTTGGGAATGGGACAGAGTTGGCCCAGCAAGAAGATATCTACCCAGCCA
TGCCAGAGCCCATCAGGAAGTGCCACAGTGCAACAAGGACATGGTCCTTAAGA
CCAAGAAGAATGGCGGGTTCTACCTCAGCTGCATGGGTTTCCAGAGTGTGCTC
AGCTGTGTGGCTTCCTGACTCGGTGCTGGAGGCCAGCAGGGACAGCAGTGTGTGT

CCAGTTTGTGTCAGCCACACCCTGTGTACAGGGTTAAAGTTAAAGTTTAAGCGCGGT
 AGCCTTCCCCCGACCATGCCTCTGGAGTTTGTGTTGCTGCATCGGCGGATGCGACG
 ACACCCTGAGGGAGATCCTGGACCTGAGATTTTCAGGGGGCCCCCCCAGGGCTA
 GCCAGCCCTCTGGCCGCCTGCAGGCTAACCAGTCCCTGAACAGGATGGACAACA
 5 GCCAGCACCCCCAGCCTGCTGACAGCAGACAGACTGGGTCTCAAAGGCTCTGG
 CCCAGACCCTCCCACCACCCACGGCTGCTGGTGAAAGCAATTCTGTGACCTGCAA
 CTGTGGCCAGGAGGCTGTGCTGCTCACTGTCCGTAAGGAGGGGCCCAACCGGGG
 CCGGCAGTTCTTTAAGTGCAACGGAGGTAGCTGCAACTTCTTCCTGTGGGCAGAC
 AGCCCCAATCCGGGAGCAGGAGGGCCTCCTGCCTTGGCATATAGACCCCTGGGC
 10 GCCTCCCTGGGATGCCACCAGGCCAGGGATCCACCTAGGTGGGTTTGGCAACC
 CTGGTGATGGCAGTGGTAGTGGCACATCCTGCCTTTGCAGCCAGCCCTCCGTCAC
 ACGGACTGTGCAGAAGGATGGACCCAACAAGGGGCGCCAGTTCCACACATGTGC
 CAAGCCGAGAGAGCAGCAGTGTGGCTTTTTCCAGTGGGTGATGAGAACACCGC
 TCCAGGGACTTCTGGAGCCCCGTCCTGGGACAGGAGACAGAGGAAGAACCCTGG
 15 AGTCGGAAGCCAGAAGCAAAAGGCCCGGGCCAGTTCCTCAGACATGGGGTCCA
 CAGCAAAGAAACCCCGGAAATGCAGCCTTTGCCACCAGCCTGGACACACCCGTC
 CCTTTTGTCTCAGAACAGATGAGCTCAGGGTAGGGTAGAGAACGCCACTTTCTC
 AGACCTGTCCCTTTGTGTTTAGAAATGAGTTAACCAGGACCAAGTGGCCATTTA
 GTGTCCTGGAAACTTAGAGGACAGTGTGGCCTTTGGAGTCGGGCCTTCTTGTGT
 20 TAAGGGGCACAAGGTCCAGATCACTCTGGAGCAGGCCAGCTCTGCTGGACAGTG
 ACCCTCTTCCAGGCCTCAGGAGTGACCATAGCCACTGCTGAAAAGTCACGCAGC
 TGCTCCCTCGGACCCCCCAAGGATGGTTGCTGTTAGCAGAGGATTGGTGCAGTCC
 CAGCTGAAGCCCACTGTGTGCGAAAGGAAGAAGCTCCAGGGCTGCTTCTCAG
 CTGTCAGAAAGCCCCAAGTGAGCCACCAGCACTCATGGGGTAGTCCCTGTGAGG
 25 CTGCCCAGGGCTTCTCATAGACGTCCTGAGAAGGACGGTGTAATGCAAGGAAT
 GGCTGTGGTAACACTGATCCTTCAGAAGAAGCTTCATTCCCTCTTAATCTAGTTA
 AGCCAGGACATCCAGAATTCATTGCTTTAATAAAGAACCCAGGCCGGG

SEQ ID NO: 568

30 >18910 BLOOD Hs.244613 gnl|UG|Hs#S377417 Human signal transducer and activator of
 transcription Stat5B mRNA, complete cds /cds=(146,2509) /gb=U47686 /gi=1330323
 /ug=Hs.244613 /len=2782
 GGAGCCGTCACCCCGGGCGGGGACCCAGCGCAGGCAACTCCGCGCGGGCGCCCGG
 CCGAGGGAGGGAGCGAGCGGGCGGGCGGGCAAGCCAGACAGCTGGGCCGGAGC
 35 AGCCGCCGGCGCCCGAGGGGCGGAGCGAGATTGTAAACCATGGCTGTGTGGATA
 CAAGCTCAGCAGCTCCAAGGAGAAGCCCTTCATCAGATGCAAGCGTTATATGGC
 CAGCATTTTCCCATTGAGGTGCGGCATTATTTATCCCAGTGGATTGAAAGCCAAG
 CATGGGACTCAGTAGATCTTGATAATCCACAGGAGAACATTAAGGCCACCCAGC
 TCCTGGAGGGCCTGGTGCAGGAGCTGCAGAAGAAGGCAGAGCACCAAGGTGGGG
 40 GAAGATGGGTTTTTACTGAAGATCAAGCTGGGGCACTATGCCACACAGCTCCAG
 AACACGTATGACCGCTGCCCCATGGAGCTGGTCCGCTGCATCCGCCATATATTGT
 ACAATGAACAGAGGTTGGTCCGAGAAGCCAACAATGGTAGCTCTCCAGCTGGAA
 GCCTTGCTGATGCCATGTCCCAGAAACACCTCCAGATCAACCAGACGTTTGAGGA
 GCTGCGACTGGTCACGCAGGACACAGAGAATGAGTTAAAAAAGCTGCAGCAGAC
 45 TCAGGAGTACTTCATCATCCAGTACCAGGAGAGCCTGAGGATCCAAGCTCAGTTT
 GGCCCGCTGGCCCAGCTGAGCCCCCAGGAGCGTCTGAGCCGGGAGACGGCCCTC
 CAGCAGAAGCAGGTGTCTCTGGAGGCCTGGTTGCAGCGTGAGGCACAGACTG
 CAGCAGTACCGCGTGGAGCTGCCCAGAGAAGCACCAGAAGACCCTGCAGCTGCTG
 CGGAAGCAGCAGACCATCATCCTGGATGACGAGCTGATCCAGTGAAGCGGCGG

CAGCAGCTGGCCGGGAACGGCGGGCCCCCGAGGGCAGCCTGGACGTGCTACAG
 TCCTGGTGTGAGAAAGTTGGCGGAGATCATCTGGCAGAACCGGCAGCAGATCCGC
 AGGGCTGAGCACCTCTGCCAGCAGCTGCCCATCCCCGGCCCAAGTGGAGGAGATG
 CTGGCCGAGGTCAACGCCACCATCACGGACATTATCTCAGCCCTGGTGACCAGCA
 5 CGTTCATCATTGAGAAGCAGCCTCCTCAGGTCCTGAAGACCCAGACCAAGTTTGC
 AGCCACTGTGCGCCTGCTGGTGGGCGGGAAGCTGAACGTGCACATGAACCCCCC
 CCAGGTGAAGGCCACCATCATCAGTGAGCAGCAGGCCAAGTCTCTGCTCAAGAA
 CGAGAACACCCGCAATGATTACAGTGGCGAGATCTTGAACAACCTGCTGCGTCAT
 GGAGTACCACCAAGCCACAGGCACCCTTAGTGCCCACTTCAGGAATATGTCCCTG
 10 AAACGAATTAAGAGGTCAGACCGTCGTGGGGCAGAGTCGGTGACAGAAGAAAA
 ATTTACAATCCTGTTTGAATCCAGTTCAGTGTTGGTGGAAATGAGCTGGTTTTTC
 AAGTCAAGACCCTGTCCCTGCCAGTGGTGGTGATCGTTCATGGCAGCCAGGACA
 ACAATGCGACGGCCACTGTTCTCTGGGACAATGCTTTTGCAGAGCCTGGCAGGGT
 GCCATTTGCCGTGCCTGACAAAGTGCTGTGGCCACAGCTGTGTGAGGCGCTCAAC
 15 ATGAAATTCAAGGCCGAAGTGCAGAGCAACCGGGGCTGACCAAGGAGAACCTC
 GTGTTCCCTGGCGCAGAAACTGTTCAACAACAGCAGCAGCCACCTGGAGGACTAC
 AGTGGCCTGTCTGTGTCTGGTCCCAGTTCACAGGGAGAAATTTACCAGGACGGA
 ATTACACTTTCTGGCAATGGTTTGACGGTGTGATGGAAGTGTTAAAAAACATCT
 CAAGCCTCATTGGAATGATGGGGCCATTTTGGGGTTTGTAAACAAGCAACAGGC
 20 CCATGACCTACTGATTAACAAGCCAGATGGGACCTTCCTCCTGAGATTCAGTGAC
 TCAGAAATTGGCGGCATCACCATTGCTTGGAAGTTTGATTCTCAGGAAAGAATGT
 TTFGGAATCTGATGCCTTTTACCAACAGAGACTTCTCCATCAGGTCCCTAGCCGA
 TCCGCTTGGGAGACTTGAATTAGCTTATCTACGTGTTTCCTGATCGGCCAAAGAT
 GAAGTATACTCCAAATACTACACACCAGTTCCTGCGAGTCTGCTACTGCTAAAG
 25 CTGTTGATGGATACGTGAAGCCACAGATCAAGCAAGTGGTECCTGAGTTTGTGAA
 CGCATCTGCAGATGCCGGGGGCGGCAGCGCCACGTACATGGACCAGGCCCCCTC
 CCCAGCTGTGTGTCCCCAGGCTCACTATAACATGTACCCACAGAACCCTGACTCA
 GTCCTTGACACCGATGGGGACTTCGATCTGGAGGACACAATGGACGTAGCGCGG
 CGTGTGGAGGAGCTCCTGGGCGGCCAATGGACAGTCAGTGGATCCCGCACGCA
 30 CAATCGTGACCCCGCGACCTCTCCATCTTCAGCTTCTTCATCTTCACCAGAGGAAT
 CACTCTTGTTGGATGTTTTAATTCCATGAATCGCTTCTCTTTTGAACAATACTCAT
 AATGTGAAGTGTTAATACTAGTTGTGACCTTAGTGTTTCTGTGCATGGTGGCACC
 AGCGAAGGGAGTGCGAGTATGTGTTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG
 CGTTGGTGCACGTTATGGTGTTCCTCCTCTCACTGTCTGAGAGTTTAGTTGTAGC
 35 AGA

SEQ ID NO: 569

>18954 BLOOD 475048.3 AF100143 g4323512 Human fibroblast growth factor 13 isoform 1A (FGF13) mRNA, complete cds. 0

40 GAAGCGGTGGTGGTGGGCGTTCGTGGCATGGCGGCGGCTATCGCCAGCTCGCTCA
 TCCGTCAGAAGAGGCAAGCCCGCGAGCGCGAGAAATCCAACGCCTGCAAGTGTG
 TCAGCAGCCCCAGCAAAGGCAAGACCAGCTGCGACAAAAACAAGTTAAATGTCT
 TTTCCCGGGTCAAACCTCTTCGGCTCCAAGAAGAGGCGCAGAAGAAGACCAGAGC
 CTCAGCTTAAGGGTATAGTTACCAAGCTATACAGCCGACAAGGCTACCACTTGCA
 45 GCTGCAGGCGGATGGAACCATTGATGGCACCAAGATGAGGACAGCACTTACAC
 TCTGTTTAAACCTCATCCCTGTGGGTCTGCGAGTGGTGGCTATCCAAGGAGTTCAA
 ACCAAGCTGTACTTGGCAATGAACAGTGAGGGATACTTGTACACCTCGGAACCTT
 TCACACCTGAGTGCAAATTCAAAGAATCAGTGTTTGAAGAAATTATTATGTGACATA
 TTCATCAATGATATAACCGTCAGCAGCAGTCAGGCCGAGGGTGGTATCTGGGTCTG

AACAAAGAAGGAGAGATCATGAAAGGCAACCATGTGAAGAAGAACAAGCCTGC
AGCTCATTTTCTGCCTAAACCACTGAAAGTGGCCATGTACAAGGAGCCATCACTG
CACGATCTCACGGAGTTCTCCCGATCTGGAAGCGGGACCCCAACCAAGAGCAGA
AGTGTCTCTGGCGTGCTGAACGGAGGCAAATCCATGAGCCACAATGAATCAACG
5 TAGCCAGTGAGGGCAAAGAAGGGCTCTGTAACAGAACCTTACCTCCAGGTGCT
GTTGAATTCTTCTAGCAGTCCTTCACCCAAAAGTTCAAATTTGTCAAGTGACATTTA
CCAAACAAACAGGCAGAGTTCACTATTCTATCTGCCATTAGACCTTCTTATCATC
CATACTAAAGCCCCATTATTTAGATTGAGCTTGTGCATAAGAATGCCAAGCATTT
TAGTGAACATAAATCTGAGAGAAGGACTGCCAAATTTTCTCATGATCTCACCTATA
10 CTTTGGGGATGATAATCCAAAAGTATTTACAGCACTAATGCTGATCAAAATTTG
CTCTCCCACCAAGAAAATGTAAAAGACCACAATTGTTCTTCAAAAACAAAACAAA
ACAAAACAAAACAAAATTAAGTCTTAAATGTTTTGTCTGGGGCAAACAAAATTA
TGTGAATTGTGTTGTTTTCTTGGCTTGATGTTTTCTATCTACGCTTGATTACATGT
ACTCTTTTCTTTGGCATAGTGCAACTTTATGATTTCTGAAATTCATGGTTCTATT
15 GACTTTTTTGGCTCACTTAATCCAAATCAACCAAATTCAGGGTTGAATCTGAATTG
GCTTCTCAGGCTCAAGGTAACAGTGTCTTGTGGTTTGACCAATTGTTTTTCTTTC
TGTNTNTTTTTTTTTAGATTTGTGGTATTCTGGTCAAGTTATTGTGCTGTACTTTGT
GCGTAGAAATTGAGTTGTATTGTCAACCCAGTCAGTAAAGAGAACTTCAAAAA
ATTATCCTCAAGTGTAGATTTCTCTTAATTCCATTTGTGTATCATGTTAACTATT
20 GTTGTGGCTTCTTGTGTAAAGACAGGAAGTGTGGAAGTGTGATGTTGTCTTTTGT
GTTGTTAAAATAAGAAATGTCTTATCTGTATATGTATGAGTCTTCCTGTCATTGTA
TTTGGGACATGAATATTGTGTAGAAGGAATTGTTAAGACTGGTTTTCCGTCACA
ACATATATTATACTTGCTACTGGAAAAGTGTTTAAGACTTAGCTAGGTTTCCATTT
TAGATCTTCATATCTGTTGCATGGAAGAAAGTTGGGTTCTTGGCATAGAGTTGCAT
25 GATATGTAAGATTTTGTGCATTCATAATTGTTAAAAATCTGTGTTCCAAAAGTGG
ACATAGCATGTACAGGCAGTTTTCTGTCCTGTGCACAAAAAGTTTAAAAAAGTTG
TTAATATTTGTTGTTGTATACCCAAATACGCACCGAATAAACTCTTTGAATGAAT
ATAAAGAGTTTATTCGGTGCGTATTTGTTGTTGTATACCCAAATACGCACCGAAT
AAACTCTTTATATTGATTCAAAG

30

SEQ ID NO: 570

>18972 BLOOD 263164.34 X74929 g400415 Human KRT8 mRNA for keratin 8. 0

GGTGGCAGGTGACGGGTTAGGCCAGCCCCCTCTGGGCCTAGCCACTCAGGTAC
GAGGCCTTTCCCCCCCATCCCCCGGGGCTGGGATCTCTTTTATAAAAGGCCATTC
35 CTGAGAGCTCTCTCACCAAGCAGCAGCTTCTCCGCTCCTTCTAGGATCTCCGCCT
GGTTCGGCCCGCCTGCCTCCACTCCTGCCTCCACCATGTCCATCAGGGTGACCCA
GAAGTCCTACAAGGTGTCCACCTCTGGCCCCCGGGCCTTCAGCAGCCGCTCCTAC
ACGAGTGGGCCCGGTTCCCGCATCAGCTCCTCGAGCTTCTCCCGAGTGGGCAGCA
GCAACTTTCGCGGTGGCCTGGGCGGGCGGCTATGGTGGGGCCAGCGGCATGGGAG
40 GCATCACCGCAGTTACGGTCAACCAGAGCCTGCTGAGCCCCCTTGTCTGGAGGT
GGACCCCAACATCCAGGCCGTGCGCACCCAGGAGAAGGAGCAGATCAAGACCT
CAACAACAAGTTTGCCTCCTTCATAGACAAGGTACGGTTCCTGGAGCAGCAGAA
CAAGATGCTGGAGACCAAGTGGAGCCTCCTGCAGCAGCAGAAGACGGCTCGAAG
CAACATGGACAACATGTTTCGAGAGCTACATCAACAACCTTAGGCGGCAGCTGGA
45 GACTCTGGGCCAGGAGAAGCTGAAGCTGGAGGCGGAGCTTGGCAACATGCAGGG
GCTGGTGGAGGACTTCAAGAACAAGTATGAGGATGAGATCAATAAGCGTACAGA
GATGGAGAACGAATTTGTCCTCATCAAGAAGGATGTGGATGAAGCTTACATGAA
CAAGGTAGAGCTGGAGTCTCGCTGGAAGGGCTGACCGACGAGATCAACTTCCT
CAGGCAGCTGTATGAAGAGGAGATCCGGGAGCTGCAGTCCAGATCTCGGACAC

ATCTGTGGTGCTGTCCATGGACAACAGCCGCTCCCTGGACATGGACAGCATCATT
 GCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCGCAGCCGGGCTGAGGCT
 GAGAGCATGTACCAGATCAAGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCAC
 GGGGATGACCTGCGGCGCACAAAGACTGAGATCTCTGAGATGAACCGGAACATC
 5 AGCCGGCTCCAGGCTGAGATTGAGGGCCTCAAAGGCCAGAGGGCTTCCCTGGAG
 GCCGCCATTGCAGATGCCGAGCAGCGTGGAGAGCTGGCCATTAAGGATGCCAAC
 GCCAAGTTGTCCGAGCTGGAGGCCGCCCTGCAGCGGGCCAAGCAGGACATGGCG
 CGGCAGCTGCGTGAGTACCAGGAGCTGATGAACGTCAAGCTGGCCCTGGACATC
 GAGATCGCCACCTACAGGAAGCTGCTGGAGGGCGAGGAGAGCCGGCTGGAGTCT
 10 GGGATGCAGAACATGAGTATTCATACGAAGACCACCAGCGGCTATGCAGGTGGT
 CTGAGCTCGGCCTATGGGGGCCTCACAAGCCCCGGCCTCAGCTACAGCCTGGGCT
 CCAGCTTTGGCTCTGGCGCGGGCTCCAGCTCCTTCAGCCGCACCAGCTCCTCCAG
 GGCCGTGGTTGTGAAGAAGATCGAGACACGTGATGGGAAGCTGGTGTCTGAGTC
 CTCTGACGTCCCTGCCCAAGTGAACAGCTGCGGCAGCCCCTCCAGCCTACCCCTC
 15 CTGCGCTGCCCCAGAGCCTGGGAAGGAGGCCGCTATGCAGGGTAGCACTGGGAA
 CAGGAGACCCACCTGAGGCTCAGCCCTAGCCCTCAGCCCACCTGGGGAGTTTACT
 ACCTGGGGACCCCCCTTGCCCATGCCTCCAGCTACAAAACAATTCAATTGCTTTT
 TTTTTTGGTCCAAAATAAAACCTCAGCTAGCTCTGCCAATGTCAA

20 SEQ ID NO: 571

>19004 BLOOD 083318.1 K00488 g182106 Human enkephalin gene, 5' flank and intron c

(5' end): 0

GTTGGGGACGTCTGCCCGCCCTCTTCCCTTCACATTTCAATGTCATGGGTTCGCC
 AACAGCGTTCCCTGGTTCTTCTTTGTGACCCGAGTCAATGTCCTGCCTCCCCCGGC
 25 TCCCGCTCTCTCGCCCCCTGGTCTGCGGCGTTCTCTCCGGAATCTTGCCCTGGGCCG
 CGGACGCCCAGGAAAAGAGCCGGGTGCCCCAGGCAGCCTCGCGTTGGGGGCGAC
 CGCGCCATCCCGGGAA

SEQ ID NO: 572

30 >19039 BLOOD 135014.5 M64925 g189785 Human palmitoylated erythrocyte membrane protein (MPP1) mRNA, complete cds. 0

GGGCGGTGACTGGCCAGCCGCACCGCGTCTCCCGCCTTCTCCGCAGCCCCGCAG
 GCCCCGGGCCCTGTCAATCCCAGCGCTGCCCTGTCTTGCGTTCCAGTGTTCAGCT
 TCTGCGAGATGACCCTCAAGGCGAGCGAGGGCGAGAGTGGGGGCAGCATGCACA
 35 CGGCGCTCTCCGACCTCTACCTGGAGCATTTGCTGCAGAAGCGTAGTCGGCCAGA
 GGCTGTATCGCATCCATTGAATACTGTGACCGAGGACATGTACACCAACGGGTCT
 CCTGCCCCAGGTAGCCCTGCCAGGTCAAGGGACAGGAGGTGCGGAAAGTGCGA
 CTCATACAGTTTGAGAAGGTCACAGAAGAGCCCATGGGAATCACGCTGAAGCTG
 AATGAAAAACAGTCCTGTACGGTGGCCAGAATTCTTCATGGTGGCATGATCCATA
 40 GACAAGGCTCCCTTCACGTGGGGGATGAGATCCTAGAAATCAATGGCACAAATG
 TGACAAATCATTCAAGTGGATCAGCTGCAGAAGGCGATGAAAGAAACCAAAGGAA
 TGATCTCATTAAAAGTAATTCCCAACCAGCAAAGCCGTCTTCCTGCACTACAGAT
 GTTCATGAGAGCGCAGTTTGACTATGATCCCAAAAAGGACAATCTGATCCCTTGC
 AAGGAGGCGGGACTGAAGTTTGCTACTGGGGACATTATCCAGATTATCAACAAG
 45 GATGACAGCAATTGGTGGCAGGGACGGGTGGAAGGCTCCTCCAAGGAGTCAGCA
 GGATTGATCCCTTCCCCTGAGCTGCAGGAATGGCGAGTGGCAAGTATGGCTCAGT
 CAGCTCCTAGCGAAGCCCCGAGCTGCAGTCCCTTTGGGAAGAAGAAGAAGTACA
 AAGACAAATATCTGGCCAAGCACAGCTCGATTTTTGATCAGTTGGATGTTGTTTC
 CTACGAGGAAGTCGTTGCGCTCCCTGCATTCAAGAGGAAGACCCTGGTGTGATC

GGAGCCAGTGGGGTGGGTCGCAGCCACATTAAGAATGCCCTGCTCAGCCAGAAT
 CCGGAGAAGTTTGTGTACCCTGTCCCATATACAACACGGCCGCAAGGAAGAGT
 GAGGAAGATGGGAAGGAGTACCACTTTATCTCAACGGAGGAGATGACGAGGAA
 CATCTCTGCCAATGAGTTCTTGGAGTTTGGCAGCTACCAAGGCAACATGTTTGGC
 5 ACCAAATTTGAAACAGTGCACCAGATCCATAAGCAGAACAAGATTGCCATCCTT
 GACATTGAGCCCCAGACCCTGAAAATTGTTCTGGACAGCAGAACTTTCGCCTTTCA
 TTGTGTTTCATTGCACCTACTGACCAGGGCACTCAGACAGAAGCCCTGCAGCAGCT
 GCAGAAGGACTCTGAGGGCCATCCGCAGCCAGTACGCTCACTACTTTGACCTCTCA
 CTGGTCAATAATGGTGTGATGAAACCCTTAAGAAATTACAAGAAGCCTTCGACC
 10 AAGCGTGCAGTTCTCCACAGTGGGTGCCTGTCTCCTGGGTTTACTAAGCTTGTAG
 AATGGGGGAACCCACTGTATGCCCCCTCTCCAGCATTGGAATTCCACCCGCCTTG
 CTTTAAGACAAACAGGGCTGCTCCAAGTAGTTTTGTGTGCTCAGCTTCCAGCTCTCTG
 CAGCTATCCTAATTCAGCCAGTAAGGTTCAAGTCTTCTTGCTCAGGCTCCTGAAGG
 GTTGATTCTCCTGATAGATGGGGCCCCACTGATCTGGATTGAAAAGGATTTCTA
 15 GAAATTGGGGGTAAAGAAGTACTACCAAAATGTAAGTCTAATCAAGGGTGATGC
 ACAGCAAAAGCAATGGACCCCATCCCTCTAAAGCCTGCCCTCCTTTGCCTTCAAC
 TGTATATGCTGGGTATTTTCAATTTGTCTTTTTATTTTGGAGAAAGCGTTTTTAACTG
 CAACTTTCTATAATGCCAAAATGACACATCTGTGCAATAGAATGATGTCTGCTCT
 AGGGAAACCTTCAAAAGCAATAAAAATGCTGTGTTGAAATGCCAGAAAAAAA

SEQ ID NO: 573

>19055 BLOOD GB_W02116 gi|1274164|gb|W02116|W02116-zc66e09.s1
 Soares fetal heart NbHH19W Homo sapiens cDNA clone IMAGE:327304.3; mRNA
 sequence: [Homo sapiens]

TTTTTTCGGGAGAAGAAAAGCTTTACTGGGAGAAAATACAACAAATTCCAGAGT
 GCATGGTTTTTAGCCCCACCCTATCACCCACCAGCAATAGGAACACAGACCACTC
 GATCACCACACATTCCCTACCTCAGGGAGTAAGTACATCAGCCAACATCTNGGTC
 TCNGAGCTGCTGGGAAAAGGGGCAGGAGNAAGAAGTATCTGGNAATACCATTCT
 CTCACTCTNTTCCCCCTCCTT

SEQ ID NO: 574

>19319 BLOOD 331040.8 M92449 g190094 Human LTR mRNA, 3' end of coding region
 and 3' flank. 0

GTCCTGGAGCTGGAGCGCTTCCTGCCCCAGCCCTTCACCGGCGAGATCCGCGGGCA
 35 TGTGTGACTTCATGAACCTCAGCCTGGCGGACTGCCTTCTGGTCAACCTGGCCTA
 CGAGTCCCTCCGTGTTCTGCACCAGTATTGTGGCTCAAGACTCCAGAGGCCACATT
 TACCATGGTCGGAATTTGGATTATCCTTTTGGGAATGTCTTACGCAAGCTGACAG
 TGGATGTGCAATTCTTAAAGAATGGGCAGATTGCATTACAGGAAGTACTTTTAT
 TGGCTATGTAGGATTATGGACTGGCCAGAGCCACACAAGTTTACAGTTTCTGGT
 40 GATGAACGAGATAAAGGCTGGTGGTGGGAGAATGCTATCGCTGCCCTGTTTCGG
 AGACACATTCCCGTCAGCTGGCTGATCCGCGCTGTGGTTCCGAGTTGAGACAAAT
 TACGACCACTGGAAGCCAGCACCCAAGGAAGATGACCGGAGAACATCTGCCATC
 AAGGCCCTTAATGCTACAGGACAAGCAAACCTCAGCCTGGAGGCACTTTTCCAG
 ATTTTGTGCGGTGGTTCCAGTTTATAACAAATGATTTTTTAAAAAATGAAATTCTTG
 45 AAGAGCTGCACCTTAAAAAATAAGACAAAGTGAAAGTATTGTATTATGTTACAA
 ACAATGCAGGCTCCTTCCTCATTTAACTTTACAACCTTGCGAAGTGGGTCCAGGA
 GATTTGGAGTTTGTGGTAAAGCCAGTAATGGGCATTGTCCTGCATTCCCTTCCCTT
 CATGGTTTGCCTCGATCCTCTCTAAGCTTCTATCCTGGCCTGAATAACTCAAAGAT
 AATTGGTCTCAGAGATCAAGCCATATCCTCAGGCCTTATTTCCATCTTCTCATGAT

TCTGCCATCATACCTTTGCTTCTCCGCTAATGAAATGAGCTGGCAAGACCTCTGTT
 CATTGTGAAGTGCTTCTGAAAGAGCCTAAGAAAAAGGCTCATCTGAAAGAAAT
 GGAGAACTCTATTTTGAACCAAGCCTGTTTGAATGTGTGTTAGTCTGATCTTTGAT
 CATGTGTTTCCATGTAATGGGAGTCTCGTTTTTTATAATGTTTCTAACGTTTTATT
 5 GAAAAACCTATGGCCCTCCTTCTTCTCAATAGCTACTTTCTTACTGCTTTTTGAA
 AATAATATGCAACCAAATTATTTCTTAATGTCACATAATTAAGTAATAAAATGTC
 AAAAGAAATGTTGGCAAGGAGAATAAAAAAATTTCCAAGAAAAA

SEQ ID NO: 575

10 >19391 BLOOD 197556.13 Z50853 g963047 Human mRNA for CLPP. 0
 GACCGGGGCGTGCGGAGGGATGTGGCCCGGAATATTGGTAGGGGGGGGCCGGGT
 GGCGTCATGCAGGTACCCCGCGCTGGGGCCTCGCCTCGCCGCTCACTTTCCAGCG
 CAGCGGCCGCCGAGCGTACACTCCAGAACGGCCTGGCCCTGCAGCGGTGCCTG
 CACGCGACGGCGACCCGGGCTCTCCCGCTCATTCCCATCGTGGTGGAGCAGACG
 15 GGTCGCGGCGAGCGCGCCTATGACATCTACTCGCGGCTGCTGCGGGAGCGCATC
 GTGTGCGTCATGGGCCCGATCGATGACAGCGTTGCCAGCCTTGTTATCGCACAGC
 TCCTCTTCTGCAATCCGAGAGCAACAAGAAGCCCATCCACATGTACATCAACAG
 CCCTGGTGGTGTGGTGACCGCGGGCCTGGCCATCTACGACACGATGCAGTACATC
 CTCAACCCGATCTGCACCTGGTGCCTGGGCCAGGCCGCCAGCATGGGCTCCCTGC
 20 TTCTCGCCGCCGGCACCCAGGCATGCGCCACTCGCTCCCCAACTCCCGTATCAT
 GATCCACCAGCCCTCAGGAGGCGCCCGGGGCCAAGCCACAGACATTGCCATCCA
 GGCAGAGGAGATCATGAAGCTGAAGAAGCAGCTCTATAACATCTACGCCAAGCA
 CACCAAACAGAGCCTGCGAGGTGATCGAGTCCGGCATGGAGAGGGACCGCTACAT
 GAGCCCCATGGAGGGCCAGGAGTTTGGCATCTTAGACAAGGTTCTGGTCCACCCT
 25 CCCAGGACGGTGAGGATGAGCCACGCTGGTGCAGAAGGAGCCTGTAGAAGCA
 GCGCCGGCAGCAGAACCTGTCCCAGCTAGCACCTGAGAGCTGGGCCTCCTCTCCA
 GAATCATGTGGAGGGGCCAGAGGCCTGCCAGACCCCCAGCTGGGCCCTGCTCAC
 CCCTTGTTGCTGGGCTTGAGGGGGCCTCTTGAGGAACCTTTTAATTTGCAGGGGTG
 CCCGCTATGGACGGGGCATTCCAGCTGAGACACTGTGATTTTAAATTAAATCTTT
 30 GTGGTCTTTG

SEQ ID NO: 576

>19403 BLOOD 1144353.1 X12953 g35836 Human rab2 mRNA, YPT1-related and member of ras family. 0

35 TTCAAGTACATCATAATCGGCGACACAGGTGTTGGTAAATCATGCTTATTGCTAC
 AGTTTACAGACAAGAGGTTTCAGCCAGTGCATGACCTTACTATTGGTGTAGAGTT
 CGGTGCTCGAATGATAACTATTGATGGGAAACAGATAAAACTTCAGATATGGGA
 TACGGCAGGGCAAGAATCCTTTCGTTCCATCACAAGGTCGTATTACAGAGGTGCA
 GCAGGAGCTTTACTAGTTTACGATATTACACGGAGAGATACATTCAACCACTTGA
 40 CAACCTGGTTAGAAGATGCCCGCCAGCATTCCAATTCCAACATGGTCATTATGCT
 TATTGGAAATAAAAGTGATTTAGAATCTAGAAGAGAAGTAAAAAAGAAGAAG
 GTGAAGCTTTTGCACGAGAACATGGACTCATCTTCATGGAAACGTCTGCTAAGAC
 TGCTTCCAATGTAGAAGAGGCATTTATTAATACAGCAAAAGAAATTTATGAAAA
 AATTCAAGAAGGAGCTTTGACATTAATAATGAGGCCAATGGCATTAATAATTGGC
 45 CCTCAGCATNTGTTACCATGCCACACATGCAGGCNATCAGGGAGGCANCAGCTG
 GGGCNGCTCTGTTGANTCTGTTTATGCTANTGCCACGGGCTTCTCCCTTATCTTAN
 CCTTCTCTGGNACTGGNTGACCTTTGAAAGGTTTGCCAGAGATTANCCGCAATC
 T

SEQ ID NO: 577

>19425 BLOOD gi|1376913|gb|W68044.1|W68044 zd39f04.r1

Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:343039 5', mRNA
sequence

5 AATATTTTCAGCTTCANCCATGTTGTTGGAGATGGAAAGATGGAAGCAGGACAG
AGAAACTGGTCGATTTTCAAGGCCCTGTGAGTGCCTCGTCGTGCGTGTGGCCCCA
GACCTCGGAGAAAGGATCACGCTAAGCGGTGACAAATCCTTGATAGAAGAAGTA
TTTCCAGAGATCCGGCGACGTGATGTGTAACCTCTGTCAATGCAGGCTGGAATCAC
GACTCGACGCACGTCATCAGGTTTCCACTAAATGGCTACTGTACCTCAACTCAG
10 TCCAAGGTCCTCGAGAGGTTGCAAGCAAAGAAGGATTTGAAATCCGTGGGCTCC
TGTGGGGGAGGAGTAGACTCCGTCCCAAGTTCAGCCGAATACGTCCTTTCGGCGG
GAACTTGAGGCGGACCCCCCGTGTACCCTCCGTCATCCCGGATAAAGCAAAGAG
CCTCTGGACTAAAATGGACATANTTCTTTAATGCAAAAAGGAAAACACACACA
AACCNATT

15

SEQ ID NO: 578

>19535 BLOOD 157116.31 Incyte Unique

AAGACCACTAGATTTTCTGGATTTAGAAAGACCTCCTACAACCCCTCAAAATGAA
GAAATCCGAGCAGTTGGCAGACTAAAAAGAGAGCGGTCTATGAGTGAAAATGCT
20 GTTCGCCAAAATGGACAGCTGGTCAGAAATGATTCTCTGTGGCACAGATCAGATT
CTGCCCCAAGAAATAAAATTTCAAGGTTCCAGGCACCGATTTCTGCACCGGAGTA
CACTGTGACACCATEGCCACAACAGGGCTGGGGTCTGTCCTCCCATATGTTACCT
GAGATGGAGCTAATCTTTCCTCTGCTGGTGGCATTGTTGTCGCTTATCCAGTCTTC
TACTCGTAGGGCATAACAGCAGATCTTGGATGTGCTGGATGAAAATCGCAGACCT
25 GTGTTGCGTGGTGGGTCTGCTGCCGCCACTTCTAATCCTCATCATGACAACGTCA
GGTATGGCATTTCAAATATAGATACAACCATTGAAGGAACGTCAGATGACCTGA
CTGTTGTAGATGCAGCTTCACTAAGACGACAGATAATCAAATAAATAGACGTCT
ACAACCTTCTGGAAGAGGAGAACAAAGAACGTGCTAAAAGAGAAATGGTCATGTA
TTCAATTACTGTAGCTTTCTGGCTGCTTAATAGCTGGCTCTGGTTTCGCCGCTAGA
30 GGTAACATCAGCCCTCAAAAATACTGTCTCAACAGCTGGAAATATAAAAGATTT
GCAAACCTTCTTTGTTTCTGTCTCTGCATTGTATGCCATTTTATAGTCCACACCCTG
AAAATGTATTTCTTCCAGAAAGTCTGGAGGAAGGACCTATATTTGTAGAAGTAAA
GGTATATTCTGTCACTCAGCTGTATTCACGTCTGAGCAGTTCTGCAGTAACACCT
GCTTAAAATTCTCCCTTTCATGTTTTGTAAATAGGCTCCAGTTTTGTTTTTAAA
35 AGGAATTTATTTTTTGCCTCATCAGTCCACCCAAGTATTCTGAATGGGAGAGAG
TCTGTAGAGAATTGATTCAGAAAAGTGTCTGTGAAAGAAAAACAATTATTTTGTCT
CTGTTTCTCAAACAGTGTTAAGCAGTTTTGTTAATAGACATTTTTCATCGACACT
TCAACATTAACACTTTGAAAGTCATGGTCTGGTGCCAGATTTAAGAACTCGAAC
CACCTAATATTTTATAACCTTCTTCATTAGGTACTTGTACAGATTAATTTCTAACA
40 TTGCAGCAGTTTCATATGTGTGCAATATGTGCATTCTTTCATTTTAGTTTTGCACT
TGGTTTTCTATAAAGTACGTTTTTACTCAGTTCATGCGTGAACAATTTAAAAAAC
GACAGAATAAGGTACAAATGTAGTGTATTTAATAAACTGTCAACCAAAGA

SEQ ID NO: 579

45 >19539 BLOOD 238238.1 Incyte Unique

CTTTTTTTATTTTTTATCTCTATGCTTAATAGAAAACATATTTTTATTCCGTACTTT
AAAAATATAGACTTTCTAGCAACTTATAAATTTCTATTATAATAATAAATTGATA
CTTTGAGCCAAGAAAACAATATAACCAAAAATTCATTTGTTCCCTTTGTTTAGGG
GTGTTTTACATTTATGCATAATTTTGCTTTTATAAAAGATGATTGTTACAATCAGG

TCTTTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCTATTGGCTTCAAGTTGTTTACGCTT
 TCTTTTGGTAGGTTTGGCTTGTTCGCTGAAAGGATCCCTTCTTCATGTCCTCCGATGATG
 TCTTTTTCAGGCAAGGGTCTCTTGTATATGTGGTACTAACTCGGGCCACCTGGTCAT

>19696 BLOOD gi|1401816|gb|W87741.1|W87741 zh68c06.s1

CAATGATATATTTATTGTGTAAATCTTAAAATTTTTTAAAAACAATTCTTAAATAC
AAATCTGTAAAGAAAAAAAAAAGATGGTAAGCATAAAAAAGTTCTTTTATGCC
CAAAGTCCAATTTGAGGCAGTTTACATTATGGCTAAATCTTTCAGTCTCAAGACT
40 CAGCCAAGGTTGTGAGGTTGCATTTGATCATGCATTTGAAACAAGTTCATACGGT
GATTGCTCAGGACATTTCTGTTAGAAGGAATCGTTTTCTTACTTTTCTTACGCA
CAAGAGTTCCGTAGCTGTTCAAGTTTCGTGTTTCAACTGTTCTCGTCGTTTCCGCA
ACAAGTCCTCTTCAGAAATGAGCTTTTGCTCCTCTGCTTGGACGGACAGGATGTA
TGCTGTGGCTTTTTTAAAGGATAACTACCTTGGGGGCCTTTTCATTGTTTTCCAAC
45 CCGGGATCTGGGTACGCGAGGGCAAAAAAGCTCCGTTTTAAGCTCGTTCCTCCTC
TGGGCGCTCCTCGTGCC

>19853 BLOOD 1096264.4 L22009 g347313 Human hnRNP H mRNA, complete cds. 0

TTCACATGGCCGTTATAACGACGCGCGTCGTGGCCGTTTCGTATTTACAACGTCGT
GACTGGAAAACAGTGTAATTCTAAGCACCTCTTTCAGTATTCAAGTCAAACAACG
TGAAATAGGATGGGTGTAAAGCATACTGGTCCAAATAGTCCTGACACGGCCAAT
GATGGCTTAGTACGGCTTAAGAGGACTACCCTATAGGATGTAGCAAGGAAGAAA
5 TTGTACAGTTCTATCTACAGGTATGTAGTCATAGTTAGTTGCTAGAGCAGTGAGT
ATAAAGGCTAGCTTATGGCAAGGTGATTTAATAGACGTTAAAGTTGAGTAGCTTA
GGTATTTTCAGTAGGTTGTAAATATGCCAATGAATTAATGTTTACTTCCTAGAGAC
CTTCAAATAATTTAAGCCCATCTTAAAGGTGGAAATGAAGTACTATCCAAAATGT
TAACTTTGCCTATATTTAGTATTATAGTTCAGAGTAGATCTTTTCATTGAGGATTGC
10 CCTCAACAGCTTAACTACTTTTCCTCACATTGGTGTCCAGCTAAGTACCTCAAGTTA
AAGGTAAGATCCCTTTACCAGCAGATCATCAGTGCGATGAATTAGGTTGTTGTAA
ATTATGGCAAGTGTCTGTGTTGCAAGACACACGTATTTGGGTCATGTGACCAGAA
GCATCTAATGGTCTAATTCTCTTTAATGCAAAAGTCGGTTTATGAAAGACTTGGT
TTAACCTGTGTGGTATAACTTACTGAAAATCAGATGTAGTGAGAGTAGTTTGAAT
15 GCTTGTAGTCTCAGTATCTGAAATAAGTGTTTTGAAATTGTTTCTGGGCCTAAAG
TATTTGAATGTTTTTATGCTGAAGAGCTGATAAGATTGCATGTTTAAACAATGTTA
GATAAGATATCGTATATTTGAAGTATTAATATTGATGAGGTGATACTGGAAGC
AAGAAATCCTTTCATGGTTTAGTGTAGTATGTTAAAAAATTGATATATGTATCGAG
TCCTAATGTCAGAATTTTTTAAAATCAAGTCTGTTTTGTTTTGACACTAAATTGGTG
20 AGAATTGAATGCTGTCAACGTTAAATATGAACATAATTCATATCTTCTAGGAAA
GTGCTTTAAGTCCTTTTTTGTAAAGCTTGGGAATGTATCCACGGAAAGGATTTTTTCAT
TAGACGGAATTTCCAGAAGTGAATCATAACTACTGTTAGAGCATAAGCATGCATG
ATTGTGCTGTGTAGATCAGTTTGGTTGAAAGTTTAGATTGTTGTGTTTGTCAATTA
TAATTTAATGTTTCAGTTTTTATATGAAATGTTGTAAATGTATACCTTTTTTAAAAA
25 CTTGAAGTTCCAATAACTTAAAGCATTGAAATATAAAATGAGGTAAAAGGTGTTT
TGAATTTAGTAAAACCTGTTATTTAATGCTTAAAACCTAATTGAATTGTATAATTCT
CAACATTAAGTTGCATAGATATGTGTTCTTAAAGTTGTTGAATTCTTAATGCATCCT
GTGTTTCAGCAAGTTTTTTTTAATATATACTGTACCATGGGTGTGTTAAGAATAGTT
ATACTTTATAATAATGGAACCTTCATATTATTGCAATGCATATTTAAAGAGTACTT
30 GTTGAAAGCATACCATTACCTAAAGTTAAAAATTCTGGTTTATTTAAAGCTATA
AGAAGAATCATTTCTGGGCTTGTGATGTTAATATTGCCCCCTACTGGGGTTATTT
GTCCTTGGGTTGAAGGGTTGGAAATCGTGCCAAATGGGATAACATTGCCGGTGG
ACTTCCAGGGGAGGAGTACGGGGGAGGCCTTCGTGCAGTTTGCTTCACAGGAAA
TAGCTGAAAAGGCTCTAAAGAAACACAAGGAAAGAATAGGGCACAGGTGGGGA
35 TGGATGGTTGGTTGGATATGTCACCTTTCTTATGGTAAACAATTAAATCCATATTC
TCTCTGCTTAAAAGAAGAAATTAATGTTTTGTAGTCCTAGGTAATTGATGTTTTGC
CATGATTTCCAAACTTGTGTGAGTCCACGTTACACGCAAACCTAAATTTTAGGTTT
GAAATTTGTCCCTAGTTAATTGGTCTGCTTGACAATTTTGTGAGTCTTATTAACCC
CAATCAATAGAGTTGAGAGACTATGGCTTTAAAAAATTAATGCAAACCTGGCTTT
40 AGCTGTAATAACACCCACCTAGAATAAATTAATATTACCATAAGAAAATGTGAT
ACTTTCTGATCTTGTTTTTAAAGTTGAAATGCAACAACTTTTTCTTGCTGTATAT
AAATATTCTGCATAGTATTAATAAGCATAGCTTTCAAGAAATTGTCACAAAAGGT
TTTATTCTCTTTGCTTGTGACTATTTTTTCATTGAAGCATGCGCTTACCTATGCTGAT
TCTTACTAAAAGCATAGGCTGGGGTATTTATTGGCGAAAGGAAATGTGTAGTGTG
45 GGCTGGACTGTTGGTGGAGGCTGGCTTTTTAGCCCACTTGCTATACATGCTGCCA
ATGGATTTAAGACTTGAAATGTTGAAAGTTGAGTGGAATTATTTCCCTCCTAAAA
CATTTATTTACAGTACTCCTCTCTACCCCTAAGGTTGGGCTCTGCCTCAGAGGAGT
GAGTTTTTTTTTTTTTCTATAAAGTTTACATTGTCTTACTATTTATTGAGTGAATT
TCTGGTCATTGCCTATGCAATATAAGAAATCTGGCTTTAATATTAGTCAGTTTC

ATGGCTATGACTAGATTGTTTTCTTGTATAACTAAATACCTGTATAAAATGAACT
AATGTTTTCTCTCCCCTCCCTACCCCTTCCTTATGAACAATGCTTTAGGTATATTG
AAATCTTTAAGAGCAGTAGAGCTGAAGTTAGAATCATTATGATCCACCACGAA
AGCTTATGGCCATGCAGCGGCCAGGTCCTTATGACAGACCTGGGGCTGGTAGAG
5 GGTATAACAGCATTGGCAGAGGAGCTGGCTTTGAGAGGATGAGGCGTGGTGCTT
ATGGTGGAGGCTATGGAGGCTATGATGATTACAATGGCTATAATGATGGCTATG
GATTTGGGTCAGATAGATTTGGAAGAGACCTCAATTACTGTTTTTCAGGAATGTC
TGATCACAGATACGGGGATGGTGGCTCTACTTTCCAGAGCACAAACAGGACACTG
TGTACACATGCGGGGATTACCTTACAGAGCTACTGAGAATGACATTTATAATTTT
10 TTTTCACCGCTCAACCCTGTGAGAGTACACATTGAAATTGGTCCTGATGGCAGAG
TAACTGGTGAAGCAGATGTCGAGTTCGCAACTCATGAAGATGCTGTGGCAGCTAT
GTCAAAAGACAAAGCAAATATGCAACACAGATATGTAGAATCCTTCTTGAATTCT
ACAGCAGGAGCAAGCGGTGGTGCTTACGAACACAGATATGTAGAATCCTTCTTG
AATTCTACAGCAGGAGCAAGCGGTGGTGCTTATGGTAGCCAAATGATGGGAGGC
15 ATGGGCTTGTCAAACCAAGTCCAGCTACGGGGGCCAGCCAGCCAGCAGCTGAGT
GGGGGTTACGGAGGCGGCTACGGTGGCCAGAGCAGCATGAGTGGATACGACCAA
GTTTTACAGGAAAACCTCCAGTGATTTTCAATCAAACATTGCATAGGTAACCAAGG
AGCAGTGAACAGCAGCTACTACAGTAGTGGAAGCCGTGCATCTATGGGCGTGAA
CGGAATGGGAGGGTTGTCTAGCATGTCCAGTATGAGTGGTGGATGGGGAATGTA
20 ATTGATCGATCCTGATCACTGACTCTTGGTCAACCTTTTTTTTTTTTTTTTTTTC
TTTAAGAAAACCTTCAGTTTAACAGTTTCTGCAATACAAGCTTGTGATTTATGCTTA
CTCTAAGTGGAAATCAGGATTGTTATGAAGACTTAAGGCCCAGTATTTTGAATA
CAATACTCATCTAGGATGTAACAGTGAAGCTGAGTAACTATAACTGTAAACTT
AAGTTCAGCTTTTCTCAAGTTAGTTATAGGATGTACTTAAGCAGTAAGCGTATT
25 TAGGTAAAAGCAGTTGAATTATGTTAAATGTTGCCCTTTGCCACGGTAAANTGGA
CCACTGTTTTGGGATGCATGTTGAAAGACATGCTTTTATTTTTTTGTAAAACAATA
TAGGAGCTGTGTCTACTATTAAGTGAACATTTTGGGCATGTTTGTTTAAATT
CTTAGTTTTTCATTTTAAATAAACCCCTGTTAAGGGCAACGGTAAAGTTTTAAAGCC
TTTTNTNTNTNTNTNTTTTAAAGTTTAAATGGGGGGAAAAAAAATTTT

30

SEQ ID NO: 582

>19871 BLOOD GB_X00187 X00187 Preproenkephalin (leu-enkephalin, met-enkephalin)

CAGCCGTTAAGCCCCGGGACGGCGAGGCAGGCGCTCAGAGCCCCGCAGCCTGGC
CCGTGACCCCGCAGAGACGCTGAGGACC

35

SEQ ID NO: 583

>19872 BLOOD 1102297.22 X63432 g28335 Human ACTB mRNA for mutant beta-actin
(beta'-actin). 0

TTTGGCTTTATTCATTTTTTTGTGAGAGTTGACCATCAGGTATATTGGGGAAGGGA
40 GAGATGGAGGCACCTTCATGAGTGCCTCCCAAGGGCAGTAGCCTCTGCAACTTGC
TGGGGGTTTCAGGGGAAGCAGGGAGTTCATGGGGCTCCTCCAGCAAAGATGAGCT
CCAGGGCTGCTTGGATGTCCCCACCGGTGGCCTGCAGGGCCCGCAGGCTCAGCTC
ATCGTCCTGGATGCCCATGTACGTAGCTGCTGCAGCTGGGGCTGCCACTGGCTC
TGAAGGCTGGGCTGCCCAGAGGCCTGAAGGGCATGCTGTAGGGCTTGGCTGAAG
45 AGATCATTGGTGTGATGGGCGTCCCTGACTGGACACCAGAGGACATTGGTGAGGTC
CCTGAGGAATGACCCTGGGTGCCAGGAGTCGGTGTGTGAGAGCTGCTCTCCGGA
GTGCTGGCCAGGGCCAAGGCGGTGGCCAGCTCACTCTGGGTGATGGGCCGGGGC
CCAGCAGCTCCACTGTACCCAGGGAGGCTGGGCGGGAGCTGGGAGTACTGCTA
GAGGGTGTGGACCTGGTGTGTTGGGTGAAAGTCATCCTCATCATCTGAGAGCCCTT

CAAACAGGAAGCCACCTGGCATATCCCGGTATGAGCTGGAGGGCATGCTCCGGG
 AAGAGGAGTCAGTCCCAGGCATTGGGGCACTGCCTGCTACGGAGTGCAGAACCA
 GGACAATGGCATTGACGAGGGGCTGGGTGAGCAGGCACCAACGTATCAAGCATAT
 TGGGATCAGCGAAGACAGAGAAGAGGTCCTTGTCTGAGAGAACCCCAAGAGCAA
 5 TAGGGTCACTGCTGAGGCCTGGGGTGGCCACAATGATCTGATCCAGAGACTCCTT
 ATTGCTGAGCATCTTAAAGACCGCCTCCCTGTAAGAGGAGCTGCTGTGCAGGGCA
 GTGTGCAACACCCGGAACCTCTCTCATGGCAGCCACTTTGTCCACAGGTTCCGGTT
 TCTGATCAGGTTTCAAGGCCAGGACTTTTCGAGAACATGGACAGTGGACCCAGGTT
 GAATGCCATAGAAAGTCAAGTGTCTGGTCATCTTTTAGCTTCCGACCACAGTAGAT
 10 CAGATCAATCAGCTCAGGGTCTGGAACAGACTCCTGGAGTTTGCCAGCAATAAG
 CTGCTTCAGAAATGAAATACTATAGCCCCCTAGCGAGTATTCTCCAGTTCTGTCT
 TCTGGCAACCGAAGAATAGACTTTGGAGTAAGTGGCTGGTCAGCCAGCTTCACC
 GCCAGGTGCCAGTCTGAGAGAGACATCCTCTCTCTTTCGCGCTCTCTCTTCTCCC
 CGTCCCGCCGAGACCGCGTCCGCCCCGCGAGCACAGAGCCTCGCCTTTGCCGATC
 15 CGCCGCCCGTCCACACCCGCCGCCAGCTCACCATGGATGATGATATCGCCGCGCT
 CGTCGTCGACAACGGCTCCGGCATGTGCAAGGCCGGCTTCGCGGGGCGACGATGC
 CCCCCGGGCGCTTCCCCCTCCATCGTGGGGCGCCCCAGGCACCAGGGCGTGATG
 GTGGGCATGGGTGAGAAGGATTCTATGTGGGCGACGAGGCCAGAGCAAGAGA
 GGCATCCTCACCTGAAGTACCCCATCGAGCACGGCATCGTCACCAACTGGGAC
 20 GACATGGAGAAAATCTGGCACCACACCTTCTACAATGAGCTGCGTGTGGCTCCCG
 AGGAGCACCCCGTGCTGCTGACCGAGGCCCCCCCTGAACCCCAAGGCCAACCGCG
 AGAAGATGACCCAGATCATGTTTGAGAGCTTCAACACCCAGCCATGTACGTTGC
 TATCCAGGCTGTGCTATCCCTGTACGCTCTGGCCGTACCACTGGCATCGTGATG
 GACTCCGGTGACGGGGTCAACCACTGTGCCCATCTACGAGGGGTATGCCCTCC
 25 CCCATGCCATCCTGCGTCTGGACCTGGCTGGCCGGGACCTGACTGACTAECTCAT
 GAAGATCCTCACCGAGCGCGGCTACAGCTTCACCACCACGGCCGAGCGGGAAAT
 CGTGCGTGACATTAAGGAGAAGCTGTGCTACGTCGCCCTGGACTTCGAGCAAGA
 GATGGCCACGGCTGCTTCCAGCTCCTCCCTGGAGAAGAGCTACGAGCTGCCTGAC
 GGCCAGGTCATCACCATTTGGCAATGAGCGGTTCCGCTGCCCTGAGGCACTCTTCC
 30 AGCCTTCCCTTCCCTGGGCATGGAGTCTGTGGCATCCACGAAACTACCTTCAACTC
 CATCATGAAGTGTGACGTGGACATCCGCAAAGACCTGTACGCCAACACAGTGCT
 GTCTGGCGGCACCACCATGTACCCTGGCATTGCCGACAGGATGCAGAAGGAGAT
 CACTGCCCTGGCACCCAGCACAAATGAAGATCAAGATCATTGCTCCTCCTGAGCGC
 AAGTACTCCGTGTGGATCGGCGGCTCCATCCTGGCCTCGCTGTCCACCTTCCAGC
 35 AGATGTGGATCAGCAAGCAGGAGTATGACGAGTCCGGCCCCCTCCATCGTCCACC
 GCAAATGCTTCTAGGCGGACTATGACTTAGTTGCGTTACACCCTTTCTTGACAAA
 ACCTAACTTGCGCAGAAAACAAGATGAGATTGGCATGGCTTTATTTGTTTTTTTT
 GTTTTGTTTTGGTTTTCTTTTTTTTTTTGGCTTGACTCAGGATTTAAAACTGGAAC
 GGTGAAGGTGACAGCAGTCGGTTGGAGCGAGCATCCCCCAAAGTTCACAATGTG
 40 GCCGAGGACTTTGATTGCACATTGTTGTTTTTTAATAGTCATTCCAAATATGAGA
 TGCATTGTTACAGGAAGTCCCTTGCCATCCTAAAAGCCACCCCACTTCTCTCTAA
 GGAGAATGGCCCAGTCTCTCCCAAGTCCACACAGGGGAGGTGATAGCATTGCT
 TTCGTGTAAATTATGTAATGCAAAATTTTTTTAATCTTCGCCTTAATACTTTTTTAT
 TTTGTTTTATTTTGAATGATGAGCCTTCGTGCCCCCCTTCCCCCTTTTTTGTCCCC
 45 CAACTTGAGATGTATGAAGGCTTTTGGTCTCCCTGGGAGTGGGTGGAGGCAGCCA
 GGGCTTACCTGTACACTGACTTGAGACCAGTTGAATAAAAGTGCACACCTTAAAA
 ATGAAAAAA

SEQ ID NO: 584

>19885 BLOOD 236030.3 M17752 g33917 Human mRNA for gamma-interferon inducible early response gene (with homology to platelet proteins). 0

5 GGAACAGCCAGCAGGTTTTGCTAAGTCAACTGTAATGCCCTTATCCAATCAGAAT
TAGGGAGGGAAAATGGCTTTGCAGATAAATATGGNACACTAGCCCCACGNTTTC
TGAGACATTCCTCAATTGCTTAGACATATTCTGAGCCTACAGCAGAGGAACCTCC
AGTCTCAGCACCATGAATCAAACCTGCCATTCTGATTGCTGCCTTATCTTTCTGAC
TCTAAGTGGCATTCAAGGAGTACCTCTCTCTAGAAGTGTACGCTGTACCTGCATC
AGCATTAGTAATCAACCTGTTAATCCAAGGTCTTTAGAAAACTTGAAATTATTC
10 CTGCAAGCCAATTTTGTCCACGTGTTGAGATCATTGCTACAATGAAAAAGAAGGG
TGAGAAGAGATGTCTGAATCCAGAATCGAAGGCCATCAAGAATTTACTGAAAGC
AGTTAGCAAGGAAAGGTCTAAAAGATCTCCTTAAAACCAGAGGGGAGCAAAATC
GATGCAGTGCTTCCAAGGATGGACCACACAGAGGCTGCCTCTCCCATCACTTCCC
TACATGGAGTATATGTCAAGCCATAATTGTTCTTAGTTTGCAGTTACACTAAAAG
15 GTGACCAATGATGGTCACCAAATCAGCTGCTACTACTCCTGTAGGAAGGTAAATG
TTCATCATCCTAAGCTATTCAGTAATAACTCTACCCTGGCACTATAATGTAAGCTC
TACTGAGGTGCTATGTTCTTAGTGGATGTTCTGACCCTGCTTCAAATATTTCCCTC
ACCTTTCCCATCTTCCAAGGGTACTAAGGAATCTTTCTGCTTTGGGGTTTATCAGA
ATTCTCAGAATCTCAAATAACTAAAAGGTATGCAATCAAATCTGCTTTTTAAAGA
20 ATGCTCTTTACTTCATGGACTTCCACTGCCATCCTCCCAAGGGGCCCAAATTCTTT
CAGTGGCTACCTACATACAATTCCAAACACATACAGGAAGGTAGAAATATCTGA
AAATGTATGTGTAAGTATTCTTATTTAATGAAAGACTGTACAAAGTAGAAGTCTT
AGATGTATATATTTCCTATATTGTTTTCAAGTGTACATGGAATAACATGTAATTAAG
TACTATGTATCAATGAGTAACAGGAAAATTTTAAAAATACAGATAGATATATGCT
25 CTGCATGTTACATAAGATAAATGTGCTGAATGGTTTTCAAATAAAAATGAGGTA
CTCTCCTGGAAATATTAAGAAAGACTATCTAAATGTTGAAAGACCAAAAGGTTA
ATAAAGTAATTATAACT

SEQ ID NO: 585

>19887 BLOOD 272980.8 X02544 g24444 Human mRNA for alpha1-acid glycoprotein (orosomucoid). 0

GCAGGATTGTGTACACAGACACAGAGTAAACTTTTGCTGGGCTCCAAGTGACCGCC
CATAGTTTATTATAAAGGTGACTGCACCCTGCAGCCACCAGCACTGCCTGGCTCC
ACGTGCCTCCTGGTCTCAGTATGGCGCTGTCCTGGGTTCTTACAGTCCTGAGCCTC
35 CTACCTCTGGCTGGAAGCCCAGATCCCATTGTGTGCCAACCTAGTACCGGTGCCC
ATCACCAACGCCACCCTGGACCGGATCACTGGCAAGTGGTTTTATATCGCATCGG
CCTTTCGAAACGAGGAGTACAATAAGTCGGTTCAGGAGATCCAAGCAACCTTCTT
TTACTTCACCCCCAACAAGACAGAGGACACGATCTTTCTCAGAGAGTACCAGACC
CGACAGGACCAGTGCATCTATAACACCACCTACCTGAATGTCCAGCGGGAAAAT
40 GGGACCATCTCCAGATACGTGGGAGGCCGAGAGCATTTTCGCTCACTTGCTGATCC
TCAGGGACACCAAGACCTACATGCTTGCTTTTGACGTGAACGATGAGAAGAACT
GGGGGCTGTCTGTCTATGCTGACAAGCCAGAGACGACCAAGGAGCAACTGGGAG
AGTTCTACGAAGCTCTCGACTGCTTGCGCATTCCCAAGTCAGATGTCGTGTACAC
CGATTGGAAAAAGGATAAGTGTGAGCCACTGGAGAAGCAGCACGAGAAGGAGA
45 GGAAACAGGAGGAGGGGGAATCCTAGCAGGACACAGCCTTGGATCAGGACAGA
GACTTGGGGGCCATCCTGCCCCTCCAACCCGACATGTGTACCTCAGCTTTTTCCCT
CACTTGCATCAATAAAGCTTCTGTGTTTGGAACAGCTAAAAAAA

SEQ ID NO: 586

>19916 BLOOD 234842.5 M16447 g181552 Human dihydropteridine reductase (hDHPR)
mRNA, complete cds. 0

CTGGCAGGAGCAGGATGGCGGGCGGCGGGCTGCAGGCGAGGCGCGCCGGGTG
5 CTGGTGTACGGCGGCAGGGGCGCTCTGGGTTCTCGATGCGTGCAGGCTTTTCGGG
CCCGCAACTGGTGGGTTGCCAGCGTTGATGTGGTGGAGAATGAAGAGGCCAGCG
CTAGCATCATTGTTAAAATGACAGACTCGTTCACTGAGCAGGCTGACCAGGTGAC
TGCTGAGGTTGGAAAGCTCTTGGGTGAAGAGAAGGTGGATGCAATTCTTTGCGTT
GCTGGAGGATGGGCGGGGGCAATGCCAAATCCAAGTCTCTCTTTAAGAACTGT
10 GACCTGATGTGGAAGCAGAGCATATGGACATCGACCATCTCCAGCCATCTGGCT
ACCAAGCATCTCAAGGAAGGAGGCCTCCTAACCTTGGCTGGCGCAAAGGCTGCC
CTGGATGGGACTCCTGGTATGATCGGGTACGGCATGGCCAAGGGTGCTGTTCAACC
AGCTCTGCCAGAGCCTGGCTGGGAAGAACAGCGGCATGCCGCCCGGGGCGAGCCG
CCATCGCTGTGCTCCCGGTTACCTTGATACCCCGATGAACAGGAAATCAATGCC
15 TGAGGCTGACTTCAGCTCCTGGACACCCTTAGAATTCCTAGTTGAACTTTCCAT
GACTGGATCACAGGGAAAAACCGACCGAGCTCAGGAAGCCTAATCCAGGTGGTA
ACCACAGAAGGAAGGACGGAACCTACCCCGAGCATATTTTTAGGCCTCATCTCAGT
GCCTATGAGGGGCGCTGCCAGAAAAGTCACTAACCTGTCTCAGTGTGGCCTTGTC
AGCCTTGTTGTTTTCTGTAAACCCCTGTTTGTGGTACGAGATAATGAGTCCTATTTTT
20 CTCTCACATAATATGCATTTGCTCTCCTAGGACAGTGTAATACATTTATGTGAAGT
AAAGACATGCGAGACTGGTGGCCTGCAAATAGCATCCGTCAATCTGTGTTAACTG
GATAGGGAGGGCTCTGCATAGCACCTGCTATAGCGGTGTCATGTTGGATCGCTTT
TGTAAGTCTTTCATCTGTCCTTGACAGTGGCTGTCATCTTGACTACTTTGTTGATTT
GTGGTATTGGGGACATTTTAAAGGCTGAGTTATTTTTGAATGTCATGTTTATGTC
25 ATAGACGTAGTTTTTCGCATCCTTGAATTAAACTGCCTTAACTCCTTTTGTGGTATA
AGCAAACTACATGGACTCTGTCCTGGTATCCTTTTCCTGTGTGGTTGCCCTGTGT
CCTCTGGCCTAGGGTTAAGTGTGCAAGATAACTACTCGTGAGTATTCAGAATGTT
GTTCTAATAAATGCACTTGTTGTCTGTCTTCTTTAATCAAATCACATCTTATATA
CAGCAGTCAGAGATGAGTATACTAGAATCATGGATTGCTGGAGGTCTTTTAATCT
30 GGTGTTCTCGGAAGGGGGTGCATTTAAATCCTGAAATAAATATTTCAACACAAGA
ACACAGGCCTGATTCTGCCTTGACATGTCCAAATCTGGGGGTGATGGGATGGCC
CTGTGCATTTAGAAGCAGCTCTCCACATATGGCCAATGTAGGCTGTCCTGGTCGA
AACTAGTAGTGGTTTAATTCAAGGATGCGGAAAACCTACGTCTTATGACATAAAC
ATGACATTCAAAAATAACTCAGCCTTTAACTGGCAGAGCTAAGCCCAGATCTCTA
35 GTCACCAGACTCTTGCTGTTTTTAAAGGCCTTTACCACGTATTTTCTTTCTTTTTT
AGTGAGGTGAAATTCACATAA

SEQ ID NO: 587

>19943 BLOOD 425535.24 D14533 g286028 Human mRNA for XPAC protein. 0

TTTCCATTTTAATCCAGCATTTAAAAAGCTATCTAGACTAATGTTAAGTCCCACA
40 ATAGAGGCCCAAGAGTACAGAAAACATGATCAGACTCGTACAACCTCAATGTTT
ATTTCTGCTATTAGGGCTTTTTCCAGCAGTAGTTCCCCACTGTTTCCACCATCGTG
GAGACAGAAATCGTCCTAAAAAACACATGACTAGAACCTGGGGTACAGTGGTGC
ACCACCATTTGCTATTATTTGTTTCTTGGTTAAGAATCCAGTTCAGCCTTTGTTGAA
45 CCCTTTTCCCTCTACCCCAATCTAGGGTTTGCCTTGGTATCTTGTCCTCAAATTTGT
AGCTGACCTACCACTTCTGCACCTACTCTAGCACTCAGCTCCCATCTCTGTTGTAA
GAAGGCAATCACAGACATGACATTGTGCACACAACCAGGCCAGGTGACCTTCAC
TGAAACTTGCTTTTAAAGCCATAACATAAATTATTACTGAAGTATTACTTATAC
AAGGGTTTCATTCATCTATGAAGATGTTGCTTTTTTTTTTTGAATTTTGAAAAGGAC

499

GCGGCATGGGGTCCGGGGGCTGGCCACCGGGATAGCCGGGGGTCTGGCAGGAA
TGGGAGGCATCCAGAACGAGAAGGAGACCATGCAAAGCCTGAACGACCGCCTG
GCCTCTTACCTGGACAGAGTGAGGAGCCTGGAGACCGAGAACCGGAGGCTGGAG
AGCAAAATCCGGGAGCACTTGGAGAAGAAGGGACCCAGGTGAGAGACTGGAG
5 CCATTACTTCAAGATCATCGAGGACCTGAGGGCTCAGATCTTCGCAAATACTGTG
GACAATGCCCCGCATCGTTCTGCAGATTGACAATGCCCGTCTTGCTGCTGATGACT
TTAGAGTCAAGTATGAGACAGAGCTGGCCATGCGCCAGTCTGTGGAGAACGACA
TCCATGGGCTCCGCAAGGTCATTGATGACACCAATATCACACGACTGCAGCTGGA
GACAGAGATCGAGGCTCTCAAGGAGGAGCTGCTCTTCATGAAGAAGAACCACGA
10 AGAGGAAGTAAAAGGCCTACAAGCCCAGATTGCCAGCTCTGGGTTGACCGTGGA
GGTAGATGCCCCCAAATCTCAGGACCTCGCCAAGATCATGGCAGACATCCGGGC
CCAATATGACGAGCTGGCTCGGAAGAACCGAGAGGAGCTAGACAAGTACTGGTC
TCAGCAGATTGAGGAGAGCACCACAGTGGTCACCACACAGTCTGCTGAGGTTGG
AGCTGCTGAGACGACGCTCACAGAGCTGAGACGTACAGTCCAGTCCCTGGAGAT
15 CGACCTGGACTCCATGAGAAATCTGAAGGCCAGCTTGGAGAACAGCCTGAGGGA
GGTGGAGGCCCGCTACGCCCTACAGATGGAGCAGCTCAACGGGATCCTGCTGCA
CCTTGAGTCAGAGCTGGCACAGACCCGGGCAGAGGGACAGCGCCAGGCCAGGA
GTATGAGGCCCTGCTGAACATCAAGGTCAAGCTGGAGGCTGAGATCGCCACCTA
CCGCCGCCTGCTGGAAGATGGCGAGGACTTTAATCTTGGTGATGCCTTGGACAGC
20 AGCAACTCCATGCAAACCATCCAAAAGACCACCACCCGCCGGATAGTGGATGGC
AAAGTGGTGTCTGAGACCAATGACACCAAAGTTCTGAGGCATTAAGCCAGCAGA
AGCAGGGTACCATGATAATTTTGTCTTCTTGGACTGAAACATAGTCTGGGTCTCTC
AACGTTGCCGGTGATGATGGTTGAACATCATGTTTATATAAACCTTAATTTCTCA
TTTAATAGGAAGAAAATCTCAGGAGAGCCAAAAGGGAGGACCTGAAGGTCAGC
25 ATCCACCAAATGGAGATGGAGAGGATCCGCTACGTCCTCAGCAGCTACTTGCGG
TGTCGCCTCATGAAGGTTTGACGTGGAGATACCTCAAAGTCTCCGACCTCCGGGG
AGCCGAGAGCGGGACGTGGGAGCCGGGCTTG

SEQ ID NO: 588

30 >19975 BLOOD gi|28229|emb|X15357.1|HSAANP Human mRNA for natriuretic peptide
receptor (ANP-A receptor)
CCATGGTAGGAGCGCTCGCCTCGCTGCGGTGCCCGCTGAGGCCATGCCGGGGCC
CCGGCGCCCCGCTGGCTCCCGCCTGCGCCTGCTCCTGCTCCTGCTGCTGCCGCCG
CTGCTGCTGCTGCTCCGGGGCAGCCACGCGGGCAACCTGACGGTAGCCGTGGTA
35 CTGCCGCTGGCCAATACCTCGTACCCCTGGTTCGTGGGCGCGCGTGGGACCCGCCG
TGGAGCTGGCCCTGGCCAGGTGAAGGCGCGCCCCGACTTGCTGCCGGGCTGGA
CGGTCCGCACGGTGCTGGGCAGCAGCGAAAACGCGCTGGGCGTCTGCTCCGACA
CCGCAGCGCCCCCTGGCCGCGGTGGACCTCAAGTGGGAGCACAACCCCGCTGTGT
TCCTGGGCCCCGGCTGCGTGTACGCCGCCGCCCCAGTGGGGCGCTTCACCGCGCA
40 CTGGCGGGTCCCGCTGCTGACCGCCGGCGCCCCGGCGCTGGGCTTCGGTGTCAAG
GACGAGTATGCGCTGACCACCCGCGCGGGGGCCAGCTACGCCAAGCTGGGGGAC
TTCGTGGCGGCGCTGCACCGACGGCTGGGCTGGGAGCGCCAAGCGCTCATGCTCT
ACGCCTACCGGCCGGGTGACGAAGAGCACTGCTTCTTCTCCTCGTGGAGGGGCTGTT
CATGCGGGTCCGCGACCGCCTCAATATTACGGTGGACCACCTGGAGTTCGCCGAG
45 GACGACCTCAGCCACTACACCAGGCTGCTGCGGACCATGCCGCGCAAAGGCCGA
GTTATCTACATCTGCAGCTCCCCTGATGCCTTCAGAACCTCATGCTCCTGGCCCT
GGAAGCTGGCTTGTGTGGGGAGGACTACGTTTTCTTCCACCTGGATATCTTTGGG
CAAAGCTGCAAGGTGGACAGGGCCCTGCTCCCCGCAGGCCCTGGGAGAGAGGG
GATGGGCAGGATGTCAGTGCCCGCCAGGCCTTTCAGGCTGCCAAAATCATTACAT

ATAAAGACCCAGATAATCCCGAGTACTTGGAATTCCTGAAGCAGTTAAAACACC
 TGGCCTATGAGCAGTTCAACTTCACCATGGAGGATGGCCTGGTGAACACCATCCC
 AGCATCCTTCCACGACGGGCTCCTGCTCTATATCCAGGCAGTGACGGAGACTCTG
 GCACATGGGGGAACTGTTACTGATGGGGAGAACATCACTCAGCGGATGTGGAAC
 5 CGAAGCTTTCAAGGTGTGACAGGATACCTGAAAATTGATAGCAGTGGCGATCGG
 GAAACAGACTTCTCCCTCTGGGATATGGATCCCGAGAATGGTGCCTTCAGGGTTG
 TACTGAACTACAATGGGACTTCCCAAGAGCTGGTGGCTGTGTCTGGGGCGCAAAC
 TGAAGTGGCCCCTGGGGTACCCTCCTCCTGACATCCCCAAATGTGGCTTTGACAA
 CGAAGACCCAGCATGCAACCAAGATCACCTTTCACCCCTGGAGGTGCTGGCTTTG
 10 GTGGGCAGCCTCTCCTTGCTCGGCATTCTGATTGTCTCCTTCTTCATATACAGGAA
 GATGCAGCTGGAGAAGGAACTGGCCTCGGAGCTGTGGCGGGTGCCTGAGGGA
 CGTTGAGCCCAGTAGCCTTGAGAGGCACCTGCGGAGTGCAGGCAGCCGGCTGAC
 CCTGAGCGGGAGAGGCTCCAATTACGGCTCCCTGCTAACCACAGAGGGCCAGTT
 CCAAGTCTTTGCCAAGACAGCATATTATAAGGGCAACCTCGTGGCTGTGAAACGT
 15 GTGAACCGTAAACGCATTGAGCTGACACGAAAAGTCCTGTTTGAAGTGAAGCAT
 ATGCGGGATGTGCAGAATGAACACCTGACCAGGTTTGTGGGAGCCTGCACCGAC
 CCCCCAATATCTGCATCCTCACAGAGTACTGTCCCGTGGGAGCCTGCAGGACA
 TTCTGGAGAATGAGAGCATCACCTGGACTGGATGTTCCGGTACTCACTACCAA
 TGACATCGTCAAGGGCATGCTGTTTCTACACAATGGGGCTATCTGTTCCCATGGG
 20 AACCTCAAGTCATCCAAGTGCCTGGTAGATGGGCGCTTTGTGCTCAAGATCACCG
 ACTATGGGCTGGAGAGCTTCAGGGACCTGGACCCAGAGCAAGGACACACCGTTT
 ATGCCCCAAAAGCTGTGGACGGGCCCCCTGAGCTCCTGCGAATGGCTTCACCCCCGTG
 TGGGGGGCTCCCAGGCTGGTCAAGTATACAGCTTTGGGATCATCCTTCAGGAGATT
 GGCCTGAGGAGTGGGGTCTTCCAGGTGCAAGGTTTGGACCTGAGCCCCAAAGAG
 25 ATCATCGAGCGGGTGAAGTCGGGGTGAGCAGCCCCCTTCCGGCCCTCCCTGGCCC
 TGCAGAGTCACCTGGAGGAGTTGGGGCTGCTCATGCAGCGGTGCTGGGCTGAGG
 ACCCACAGGAGAGGCCACCATTCAGCAGATCCGCCTGACGTTGCGCAAATTTA
 ACAGGGAGAACAGCAGCAACATCCTGGACAACCTGCTGTCCCGCATGGAGCAGT
 ACGCGAACAACTCTGGAGGAACTGGTGGAGGAGCGGACCCAGGCATACCTGGAG
 30 GAGAAGCGCAAGGCTGAGGCCCTGCTCTACCAGATCCTGCCTCACTCAGTGGCTG
 AGCAGCTGAAGCGTGGGGAGACGGTGCAGGCCGAAGCCTTTGACAGTGTACCA
 TCTACTTCAGTGACATTGTGGGTTTCACAGCGCTGTCTGGCGGAGAGCACACCCAT
 GCAGGTGGTGACCCTGCTCAATGACCTGTACACTTGCTTTGATGCTGTCATAGAC
 AACTTTGATGTGTACAAGGTGGAGACAATTGGCGATGCCTACATGGTGGTGTGAG
 35 GGCTCCCTGTGCGGAACGGGCGGCTACACGCCTGCGAGGTAGCCCGCATGGCCC
 TGGCACTGCTGGATGCTGTGCGCTCCTTCCGAATCCGCCACCGGGCCCCAGGAGCA
 GCTGCGCTTGCGCATTGGCATCCACACAGGACCTGTGTGTGCTGGAGTGGTGGGA
 CTGAAGATGCCCCGTTACTGTCTCTTTGGGGATACAGTCAACACAGCCTCAAGAA
 TGGAGTCTAATGGGGAAAGCCCTGAAGATCCACTTGTCTTCTGAGACCAAGGCTGT
 40 CCTGGAGGAGTTTGGTGGTTTCGAGCTGGAGCTTCGAGGGGATGTAGAAATGAA
 GGGCAAAGGCAAGGTTTCGGACCTACTGGCTCCTTGGGGAGAGGGGGAGTAGCAC
 CCGAGGCTGACCTGCCTCCTCTCCTATCCCTCCACACCTCCCCCTACCCTGTGCCAG
 AAGCAACAGAGGTGCCAGGCCTCAGCCTCACCCACAGCAGCCCCATCGCCAAAG
 GATGGAAGTAATTTGAATAGCTCAGGTGTGCTGACCCAGTGAAGACACCAGAT
 45 AGGACCTCTGAGAGGGGACTGGCATGGGGGGATCTCAGAGCTTACAGGCTGAGC
 CAAGCCACGGCCATGCACAGGGACACTCACACAGGCACACGCACCTGCTCTCC
 ACCTGGACTCAGGCCGGGCTGGGCTGTGGATCCTTGATCCCCTCCCCCTCCCCATG
 CTCTCCTCCCTCAGCCTTGCTACCCTGTGACTTACTGGGAGGAGAGTCACCTGAA
 GGGGAACATGAAAAGAGACTAGGTGAAGAGAGGGCAGGGGAGCCCACATCTGG

GGCTGGCCCACAATACCTGCTCCCCCGACCCCCTCCACCCAGCAGTAGACACAGT
GCACAGGGGAGAAGAGGGGTGGCGCAGAAGGGTTGGGGGCCTGTATGCCTTGCT
TCTACCATGAGCAGAGACAATTAATAATCTTTATTCCAGTG

5 SEQ ID NO: 589

>20014 BLOOD Hs.347 gnl|UG|Hs#S3990 Human mRNA for lactoferrin /cds=(294,2429)
/gb=X53961 /gi=34415 /ug=Hs.347 /len=2619

GACTCCTAGGGGCTTGCAGACCTAGTGGGAGAGAAAGAACATCGCAGCAGCCAG
GCAGAACCAGGACAGGTGAGGTGCAGGCTGGCTTTCCTCTCGCAGCGCGGTGTG
10 GAGTCCTGTCCTGCCTCAGGGCTTTTCGGAGCCTGGATCCTCAAGGAACAAGTAG
ACCTGGCCGCGGGGAGTGGGGAGGGAAGGGGTGTCTATTGGGCAACAGGGCGG
CAAAGCCCTGAATAAAGGGGCGCAGGGCAGGCGCAAGTGCAGAGCCTTCGTTTG
CCAAGTCGCCTCCAGACCGCAGACATGAACTTGTCTTCCTCGTCCTGCTGTTCT
CGGGGCCCTCGGACTGTGTCTGGCTGGCCGTAGGAGAAGGAGTGTTCAAGTGGTG
15 CGCCGTATCCCAACCCGAGGCCACAAAATGCTTCCAATGGCAAAGGAATATGAG
AAAAGTGCCTGGCCCTCCTGTCAGCTGCATAAAGAGAGACTCCCCCATCCAGTGT
ATCCAGGCCATTGCGGAAAACAGGGCCGATGCTGTGACCCTTGATGGTGGTTTCA
TATACGAGGCAGGCCTGGCCCCCTACAACTGCGACCTGTAGCGGCGGAAGTCT
ACGGGACCGAAAGACAGCCACGAACTCACTATTATGCCGTGGCTGTGGTGAAGA
20 AGGGCGGCAGCTTTCAGCTGAACGAACTGCAAGGTCTGAAGTCTGCCACACAG
GCCTTCGCAGGACCGCTGGATGGAATGTCCCTACAGGGACACTTCGTCCATTCTT
GAATGGACGGGTCCACCTGAGGCCATTGAGGCAGCTGTGGCCAGGTTCTTCTCA
GCCAGCTGTGTTCCCGGTGCAGATAAAGGACAGTTCCCCAACCTGTGTGCCTGT
GTGCGGGGACAGGGGAAAACAAAATGTGCCTTCTCCTCCCAGGAACCGTACTTCA
25 GCTACTCTGGTGCCTTCAAGTGTCTGAGAGACGGGGCTGGAGACGTGGCTTTTAT
CAGAGAGAGCACAGTGTGTTGAGGACCTGTCAGACGAGGCTGAAAGGGACGAGTA
TGAGTTACTCTGCCAGACAACACTCGGAAGCCAGTGGACAAGTTCAAAGACTG
CCATCTGGCCCGGGTCCCTTCTCATGCCGTTGTGGCACGAAGTGTGAATGGCAAG
GAGGATGCCATCTGGAATCTTCTCCGCCAGGCACAGGAAAAGTTTGGAAAGGAC
30 AAGTCACCGAAATTCCAGCTCTTTGGCTCCCCTAGTGGGCAGAAAGATCTGCTGT
TCAAGGACTCTGCCATTGGGTTTTTCGAGGGTGCCCCCGAGGATAGATTCTGGGCT
GTACCTTGGCTCCGGCTACTTCACTGCCATCCAGAACTTGAGGAAAAGTGAGGAG
GAAGTGGCTGCCCCGGCGTGC CGGGTTCGTGTGGTGTGCGGTGGGCGAGCAGGAG
CTGCGCAAGTGTAACCAAGTGGAGTGGCTTGAGCGAAGGCAGCGTGACCTGCTCC
35 TCGGCCTCCACCACAGAGGACTGCATCGCCCTGGTGCTGAAAGGAGAAGCTGAT
GCCATGAGTTTGGATGGAGGATATGTGTACACTGCATGCAAATGTGGTTTGGTGC
CTGTCCTGGCAGAGAACTACAAATCCCAACAAAGCAGTGACCCTGATCCTAACT
GTGTGGATAGACCTGTGGAAGGATATCTTGCTGTGGCGGTGGTTAGGAGATCAG
ACACTAGCCTTACCTGGAACCTCTGTGAAAGGCAAGAAGTCCTGCCACACCGCCGT
40 GGACAGGACTGCAGGCTGGAATATCCCATGGGCCTGCTCTTCAACCAGACGGG
CTCCTGCAAATTTGATGAATATTTCAAGTCAAAGCTGTGCCCTGGGTCTGACCCG
AGATCTAATCTCTGTGCTCTGTGTATTGGCGACGAGCAGGGTGAGAATAAGTGCG
TGCCCAACAGCAACGAGAGATACTACGGCTACACTGGGGCTTTCCGGTGCCTGG
CTGAGAATGCTGGAGACGTTGCATTTGTGAAAGATGTCAGTGTCTTGACAGAACAC
45 TGATGGAAATAACAATGAGGCATGGGCTAAGGATTTGAAGCTGGCAGACTTTGC
GCTGCTGTGCCTCGATGGCAAACGGAAGCCTGTGACTGAGGCTAGAAGCTGCCA
TCTTGCCATGGCCCCGAATCATGCCGTGGTGTCTCGGATGGATAAGGTGGAACGC
CTGAAACAGGTGCTGCTCCACCAACAGGCTAAATTTGGGAGAAATGGATCTGAC
TGCCCGGACAAGTTTTGCTTATTCAGTCTGAAACCAAAAACCTTCTGTTCAATG

ACAACACTGAGTGTCTGGCCAGACTCCATGGCAAAACAACATATGAAAAATATT
 TGGGACCACAGTATGTCGCAGGCATTACTAATCTGAAAAAGTGCTCAACCTCCCC
 CCTCCTGGAAGCCTGTGAATTCCTCAGGAAGTAAAACCGAAGAAGATGGCCCAG
 CTCCCCAAGAAAGCCTCAGCCATTCACTGCCCCCAGCTCTTCTCCCCAGGTGTGT
 5 TGGGGCCTTGGCTCCCCTGCTGAAGGTGGGGATTGCCCATCCATCTGCTTACAAT
 TCCCTGCTGTCGTCTTAGCAAGAAGTAAAATGAGAAATTTTGTGATATTCAAAA
 AAAA

SEQ ID NO: 590

10 >20031 BLOOD gi|35521|emb|X54936.1|HSPLGF H.sapiens mRNA for placenta growth
 factor (PLGF)

GGGATTTCGGGCGGCCAGCTACGGGAGGACCTGGAGTGGCACTGGGCGCCCGAC
 GGACCATCCCCGGGACCCGCCTGCCCCCTCGGCGCCCCGCCCGGGCCGCTCC
 CCGTCGGGTTCCTCCAGCCACAGCCTTACCTACGGGCTCCTGACTCCGCAAGGCTT
 15 CCAGAAGATGCTCGAACCACCGGCCGGGGCCTCGGGGCAGCAGTGAGGGAGGC
 GTCCAGCCCCCCTCAGCTCTTCTCCTCCTGTGCCAGGGGCTCCCCGGGGGATG
 AGCATGGTGGTTTTCCCTCGGAGCCCCCTGGCTCGGGACGTCTGAGAAGATGCCG
 GTCATGAGGCTGTTCCCTTGCTTCCTGCAGCTCCTGGCCGGGCTGGCGCTGCCTG
 CTGTGCCCCCCCAGCAGTGGGCCTTGTCTGCTGGGAACGGCTCGTCAGAGGTGGA
 20 AGTGGTACCCTTCCAGGAAGTGTGGGGCCGCAGCTACTGCCGGGCGCTGGAGAG
 GCTGGTGGACGTGCTGTCGAGTACCCAGCGAGGTGGAGCACATGTTTCAGCCC
 ATCCTGTGTCTCCCTGCTGGGCTGTCACCGGCTGCTGCGGCGATGAGAATCTGCAC
 TGTGTGCGGTGGAGACGGGCAATGTACCATGCAGCTCCTAAAGATCCGTTCTG
 GGGACCGGCCCTGCTACGTGGAGCTGACGTTCTCTCAGCACGTTGCTGCGAATG
 25 CCGGCCTCTGCGGGAGAAGATGAAGCCGGAAAGGTGCGGCGATGCTGTTCCCCG
 GAGGTAACCCACCCCTTGGAGGAGAGAGACCCCGCACCCGGCTCGTGTATTTATT
 ACCGTCACACTCTTCAGTGACTCCTGCTGGTACCTGCCCTCTATTTATTAGCCAAC
 TGTTTCCCTGCTGAATGCCTCGCTCCCTTCAAGACGAGGGGCAGGGAAGGACAG
 GACCCTCAGGAATTCAGTGCCTTCAACAACGTGAGAGAAAGAGAGAAGCCAGCC
 30 ACAGACCCCTGGGAGCTTCCGCTTTGAAAGAAGCAAGACACGTGGCCTCGTGAG
 GGGCAAGCTAGGCCCCAGAGGCCCTGGAGGTCTCCAGGGGCCTGCAGAAGGAAA
 GAAGGGGGCCCTGCTACCTGTTCTTGGGCCTCAGGCTCTGCACAGACAAGCAGCC
 CTTGCTTTCGGAGCTCCTGTCCAAAGTAGGGATGCGGATTCTGCTGGGGCCGCCA
 CGGCCTGGTGGTGGGAAGGCCGGCAGCGGGCGGAGGGGATTACGCCACTTCCCC
 35 CTCTTCTTCTGAAGATCAGAACATTCAGCTCTGGAGAACAGTGGTTGCCTGGGGG
 CTTTGGCACTCCTTGTCCCCCGTGATCTCCCTCACACTTTGCCATTTGCTTGTAC
 TGGGACATTGTTCTTTCCGGCCGAGGTGCCACCACCCTGCCCCCACTAAGAGACA
 CATAAGAGTGGGCCCCGGGCTGGAGAAAGAGCTGCCTGGATGAGAAACAGCTC
 AGCCAGTGGGGATGAGGTCACCAGGGGAGGAGCCTGTGCGTCCCAGCTGAAGGC
 40 AGTGGCAGGGGAGCAGGTTCCCCAAGGGCCCTGGCACCCCCACAAGCTGTCCCT
 GCAGGGCCATCTGACTGCCAAGCCAGATTCTCTTGAATAAAGTATTCTAGTGTGG
 AAACGC

SEQ ID NO: 591

45 >20039 BLOOD Hs.2064 gnl|UG|Hs#S1973578 Human DNA sequence from clone RP11-
 124N14 on chromosome 10. Contains the VIM gene for vimentin, the DNMT2 gene for DNA
 methyl transferase 2, the 5' end of the gene for intrinsic factor-B12 receptor precursor, ESTs,
 STSs, GSSs and two putative CpG islands /cds=(492,1892) /gb=AL133415 /gi=7160477
 /ug=Hs.2064 /len=2215

CCACGCCCCTTTGGCGTGGTGCCACCGGACCCCTCTGGTTCAGTCCCAGGCGGAC
 CCCCCCTCACCGCGCGACCCCGCCTTTTTCAGCACCCAGGGTGAGCCCAGCTC
 AGACTATCATCCGGAAAGCCCCCAAAGTCCCAGCCCAGCGCTGAAGTAACGGG
 ACCATGCCCAGTCCCAGGCCCCGGAGCAGGAAGGCTCGAGGGCGCCCCACCCC
 5 ACCCGCCCACCCTCCCCGCTTCTCGCTAGGTCCCTATTGGCTGGCGCGCTCCGCG
 GCTGGGATGGCAGTGGGAGGGGACCCTCTTTCCTAACGGGGTTATAAAAACAGC
 GCCCTCGGCGGGGTCCAGTCCTCTGCCACTCTCGCTCCGAGGTCCCCGCGCCAGA
 GACGCAGCCGCGCTCCCACCACCCACACCCACCGCGCCCTCGTTCGCCTCTTCTC
 CGGGAGCCAGTCCGCGCCACCGCCGCCGCCAGGCCATCGCCACCCTCCGCAGC
 10 CATGTCCACCAGGTCCGTGTCTCTGTCCTCTACCGCAGGATGTTTCGGCGGGCCCG
 GGCACCGCGAGCCGGCCGAGCTCCAGCCGGAGCTACGTGACTACGTCCACCCGC
 ACCTACAGCCTGGGCAGCGCGCTGCGCCCCAGCACCCAGCCGCAGCCTCTACGCCT
 CGTCCCCGGGCGGGCGTGTATGCCACGCGCTCCTCTGCCGTGCGCCTGCGGAGCAG
 CGTGCCCCGGGTGCGGCTCCTGCAGGACTCGGTGGACTTCTCGCTGGCCGACGCC
 15 ATCAACACCGAGTTCAAGAACACCCGCACCAACGAGAAGGTGGAGCTGCAGGAG
 CTGAATGACCGCTTCGCCAACTACATCGACAAGGTGCGCTTCCTGGAGCAGCAG
 AATAAGATCCTGCTGGCCGAGCTCGAGCAGCTCAAGGGCCAAGGCAAGTCGCGC
 CTGGGGGACCTCTACGAGGAGGAGATGCGGGAGCTGCGCCGGCAGGTGGACCAG
 CTAACCAACGACAAAGCCCGCGTTCGAGGTGGAGCGCGACAACCTGGCCGAGGAC
 20 ATCATGCGCCTCCGGGAGAAATTGCAGGAGGAGATGCTTCAGAGAGAGGAAGCC
 GAAAACACCCTGCAATCTTTCAGACAGGATGTTGACAATGCGTCTCTGGCACGTC
 TTGACCTTGAACGCAAAGTGGAAATCTTTGCAAGAAGAGATTGCCTTTTGAAGAA
 ACTCCACGAAGAGGAAATCCAGGAGCTGCAAGGCTCAGATTCAGGAACAGCATGT
 CCAAATCGATGTGGATGTTTCCAAGCTGACCTCACGGCTGCCCTGCGTGACGTA
 25 CGTCAGCAATATGAAAGTGTGGCTGCCAAGAACCTGCAGGAGGCAGAAGAATGG
 TACAAATCCAAGTTTGCTGACCTCTCTGAGGCTGCCAACCGGAACAATGACGCCC
 TGCGCCAGGCAAAGCAGGAGTCCACTGAGTACCGGAGACAGGTGCAGTCCCTCA
 CCTGTGAAGTGGATGCCCTTAAAGGAACCAATGAGTCCCTGGAACGCCAGATGC
 GTGAAATGGAAGAGAACTTTGCCGTTGAAGCTGCTAACTACCAAGACACTATTG
 30 GCCGCCTGCAGGATGAGATTCAGAATATGAAGGAGGAAATGGCTCGTCACCTTC
 GTGAATACCAAGACCTGCTCAATGTTAAGATGGCCCTTGACATTGAGATTGCCAC
 CTACAGGAAGCTGCTGGAAGGCGAGGAGAGCAGGATTTCTCTGCCTCTTCCAAA
 CTTTTCTCCCTGAACCTGAGGGAACTAATCTGGATTCACTCCCTCTGGTTGATA
 CCCACTCAAAAAGGACACTTCTGATTAAGACGGTTGAACTAGAGATGGACAGG
 35 TTATCAACGAACTTCTCAGCATCACGATGACCTTGAATAAAAATTGCACACACT
 CAGTGCAGCAATATATTACCAGCAAGAATAAAAAAGAAATCCATATCTTAAAGA
 AACAGCTTTCAAGTGCCTTTCTGCAGTTTTTCAGGAGCGCAAGATAGATTTGGAA
 TAGGAATAAGCTCTAGTTCTTAACAACCGACACTCCTACAAGATTTAGAAAAAA
 GTTTACAACATAATCTAGTTTACAGAAAAATCTTGTGCTAGAATACTTTTTAAAA
 40 GGTATTTTGAATACCATTAAACTGCTTTTTTTTTTCCAGCAAGTATCCAACCAAC
 TTGGTTCTGCTTCAATAAATCTTTGGAAAAACTC

SEQ ID NO: 592

>20082 BLOOD 025811_Mm.1 X61800 g50378 Mouse mRNA for C/EBP delta. 0

45 AGCGATTTAAATGCTTCTTTATTCTTACAAATACTGTAAACATGAATATAAAAAG
 CATGCGCAGTCTCTTCCTCTTATCTACAAAAGTCTGTGCGAAATGTCTTTTCTACA
 AATGTACCTTAGCTGCAATGGTAATAAGACGTAGAAAATGCTACCATTATAAAA
 AATAATTTAAGGGGAAAGATTAATATAGCTTCTCTCGCAGTCCAGTGCCCAAGCT
 GCAGCTTCCTGTGCTCGCTCGCAGGTCCCAAAGGAACTTGCCGATCCGGCCGGCGTCT

GCTCCCCGCCTGTCGGGGTCTGAGGTATAGGTCGTTTCAGAGTCTCAAAGGCCAC
 GCCGCGCGTTACCGGCAGTCGGCGCCGGTGGCGCGGCAGGAAAGGCGGGCTGGG
 CAGTTTTTTGAAAAAACTGCCGGAGGCCAGCCAGGTCCCGGGTGAGCTGCTCCAC
 GCGCTGATGCAGCTTCTCGTTCTCGCCCCGACAACTCCACCAGCTTCTGCTGCATCT
 5 CCTGGTTGCGGCGCTTGGCCTTGTGCGGGCTCTTGCGCACAGCGATGTTGTTGCG
 CTCGCGCCGCTGCCGGTACTCCGGGGCTGCCGCGGTCCGGACCCCTCTTGCCCGCG
 CCCTTTTCTCGGACTGTGCCGGGCGCGAGGCTCGGCCCCGGGCTGCCTCGAGGAG
 GCTCCGGCGAAGTGGGTGGAGT

10 SEQ ID NO: 593

>20091 BLOOD 235852.13 M15395 g186933 Human leukocyte adhesion protein (LFA-
 1/Mac-1/p150,95 family) beta subunit mRNA. 0

GTCAGGACTTTACGACCCGCGCCTCCAGCTGAGGTTTCTAGACGTGACCCAGGGC
 AGACTGGTAGCAAAGCCCCACGCCCAGCCAGGAGCACCGCCGAGGACTCCAGC
 15 ACACCGAGGGACATGCTGGGGCTGCGCCCCCACTGCTCGCCCTGGTGGGGCTGC
 TCTCCCTCGGGTGCGTCCTCTCTCAGGAGTGCACGAAGTTCAAGGTCAGCAGCTG
 CCGGGAATGCATCGAGTCGGGGCCCGGCTGCACCTGGTGCCAGAAGCTGAACTT
 CACAGGGCCGGGGGATCCTGACTCCATTGCTGCGACACCCGGCCACAGCTGCTC
 ATGAGGGGCTGTGCGGCTGACGACATCATGGACCCCAACAAGCCTCGCTGAAACC
 20 CAGGAAGACCACAATGGGGGCCAGAAGCAGCTGTCCCCACAAAAGTGACGCTT
 TACCTGCGACCAGGCCAGGCAGCAGCGTTCAACGTGACCTTCCGGCGGGCCAAG
 GGGTACCCCATCGACCTGTACTATCTGATGGACCTCTCCTACTCCATGCTTGATGA
 CCTCAGGAATGTCAAGAAGCTAGGTGGCGACCTGCTCCGGGGCCCTCAACGAGAT
 CACCGAGTCCGGCCGCATTGGCTTCGGGTCTTCGTGGACAAGACCGTGTGCGG
 25 TTCGTGAACACGCACCCTGATAAGCTGCGAAACCCATGCCCAACAAGGAGAAA
 GAGTGCCAGCCCCCGTTTGCCTTCAGGCACGTGCTGAAGCTGACCAACAACCTCCA
 ACCAGTTTCAGACCGAGGTTCGGGAAGCAGCTGATTTCCGGAAACCTGGATGCAC
 CCGAGGGTGGGCTGGACGCCATGATGCAGGTCGCCGCCTGCCCGGAGGAAATCG
 GCTGGCGCAACGTCACGCGGCTGCTGGTGTGTTGCCACTGATGACGGCTTCCATTT
 30 CGCGGGCGACGGGAAGCTGGGCGCCATCCTGACCCCAACGACGGCCGCTGTCA
 CCTGGAGGACAACCTTGTAACAAGAGGAGCAACGAATTCGACTACCCATCGGTGGG
 CCAGCTGGCGCACAAGCTGGCTGAAAACAACATCCAGCCCATCTTCGCGGTGAC
 CAGTAGGATGGTGAAGACCTACGAGAACTCACCGAGATCATCCCCAAGTCAGC
 CGTGGGGGAGCTGTCTGAGGACTCCAGCAATGTGGTCCATCTCATTAAGAATGCT
 35 TACAATAAACTCTCCTCCAGGGTCTTCTGGATCACAACGCCCTCCCCGACACCC
 TGAAAGTCACCTACGACTCCTTCTGCAGCAATGGAGTGACGCACAGGAACCAGC
 CCAGAGGTGACTGTGATGGCGTGCAGATCAATGTCCCGATCACCTTCCAGGTGAA
 GGTACGGCCACAGAGTGCATCCAGGAGCAGTCGTTTGTATCCGGGCGCTGGG
 CTTACGGACATAGTGACCGTGCAGGTCCTTCCCCAGTGTGAGTGCCGGTGCCGG
 40 GACCAGAGCAGAGACCGCAGCCTCTGCCATGGCAAGGGCTTCTTGAGTGCCGGC
 ATCTGCAGGTGTGACACTGGCTACATTGGGAAAACTGTGAGTGCCAGACACAG
 GGCCGGAGCAGCCAGGAGCTGGAAGGAAGCTGCCGGAAGGACAACAACCTCCAT
 CATCTGCTCAGGGCTGGGGGACTGTGTCTGCGGGCAGTGCCTGTGCCACACCAGC
 GACGTCCCCGGCAAGCTGATATACGGGCAGTACTGCGAGTGTGACACCATCAAC
 45 TGTGAGCGCTACAACGGCCAGGTCTGCGGCGGGCCCGGGGAGGGGGCTCTGCTTC
 TGCGGGAAGTGCCGCTGCCACCCGGGCTTTGAGGGCTCAGCGTGCCAGTGCCGAG
 AGGACCACTGAGGGCTGCCTGAACCCGCGGCGTGTGAGTGTAGTGGTTCGTGGC
 CGGTGCCGCTGCAACGTATGCGAGTGCCATTACAGGCTACCAGCTGCCTCTGTGCC
 AGGAGTGCCCCGGCTGCCCTCACCTGTGGCAAGTACATCTCCTGCGCCGAGTG

CCTGAAGTTCGAAAAGGGCCCCTTTGGGAAGAACTGCAGCGCGGCGTGTCCGGG
 CCTGCAGCTGTCGAACAACCCCGTGAAGGGCAGGACCTGCAAGGAGAGGGACTC
 AGAGGGGCTGCTGGGTGGCCTACACGCTGGAGCAGCAGGACGGGATGGACCGCTA
 CCTCATCTATGTGGATGAGAGCCGAGAGTGTGTGGCAGGCCCAACATCGCCGC
 5 CATCGTCGGGGGCACCGTGGCAGGCATCGTGCTGATCGGCATTCTCCTGCTGGTC
 ATCTGGAAGGCTCTGATCCACCTGAGCGACCTCCGGGAGTACAGGCGCTTTGAG
 AAGGAGAAGCTCAAGTCCCAAGTGAACAATGATAATCCCCTTTTCAAGAGCGCC
 ACCACGACGGTCATGAACCCCAAGTTTGCTGAGAGTTAGGAGCACTTGGTGAAG
 ACAAGGCCGTCAGGACCCACCATGTCTGCCCCATCACGCGGCCGAGACATGGCT
 10 TGCCACAGCTCTTGAGGATGTCACCAATTAACCAGAAATCCAGTTATTTTCCGCC
 CTCAAATGACAGCCATGGCCGGCCGGGTGCTTCTGGGGGCTCGTCGGGGGGAC
 AGCTCCACTCTGACTGGCACAGTCTTTGCATGGAGACTTGAGGAGGGAGGGCTTG
 AGGTTGGTGAGGTTAGGTGCGTGTTTCCTGTGCAAGTCAGGACATCAGTCTGATT
 AAAGGTGGTGCCAATTTATTTACATTTAAACTTGTCAAGGTATAAAATGACATCC
 15 CATTAATTATATTGTTAATCAATCACGTGTATAGAAAAAAATAAACTTCAATA
 CAGGCTGTCCATGGAAAAAAAAGGG

SEQ ID NO: 594

>20222 BLOOD gi|32025|emb|Y00291.1|HSHAPRA Human hap mRNA encoding a DNA-binding hormone receptor

20 CGGGGTAGGATCCGGAACCCATTTCGGAAGGCTTTTTGCAAGCATTTACTTGGAAG
 GAGAACTTGGGATCTTTCTGGGAACCCCCCGCCCCGCTGGATTGGCCGAGCAA
 GCGTGGAAAAATGGTAAATGATCATTTGGATCAATTAGAGGCTTTTAGCTGGGTTG
 TCTGTCAATAATTCATGATTCGGGGCTGGGAAAAAGACCAAGAGCCTACGTGCGA
 25 AAAAAAGGGGCAGAGTTTGATGGAGTTGGGTGGACTTTTCTATGCCATTTGCCTCC
 ACACCTAGAGGATAAGCACTTTTGCAGACATTCAGTGCAAGGGAGATCATGTTTG
 ACTGTATGGATGTTCTGTCAAGTCCCTGGGCAAATCCTGGATTTCTACACTGC
 GAGTCCGTCTTCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGA
 TTGACCCAAACCGAATGGCAGCATCGGCACACTGCTCAATCAATTGAAACACAG
 30 AGCACCAGCTCTGAGGAACTCGTCCCAAGCCCCCATCTCCACTTCTCCCCCTC
 GAGTGTAACAAACCTGCTTCGTCTGCCAGGACAAATCATCAGGGTACCACTATGG
 GGTCAAGCGCTGTGAGGGATGTAAGGGCTTTTTCCGCAGAAGTATTCAGAAGAA
 TATGATTTACACTTGTACCGAGATAAGAACTGTGTTATTAATAAAGTCACCAGG
 AATCGATGCCAATACTGTCACTCCAGAAGTGCTTTGAAGTGGGAATGTCCAAA
 35 GAATCTGTCAAGGAATGACAGGAACAAGAAAAAGAAGGAGACTTCGAAGCAAGA
 ATGCACAGAGAGCTATGAAATGACAGCTGAGTTGGACGATCTCACAGAGAAGAT
 CCGAAAAGCTCACCAGGAACTTTCCCTTCACTCTGCCAGCTGGCTAAATACACC
 ACGAATTCCAGTGCTGACCATCGAGTCCGACTGGACCTGGGCCTCTGGGACAAAT
 TCAGTGAAGTGGCCACCAAGTGCATTATTAAGATCGTGGAGTTTGCTAAACGTCT
 40 GCCTGGTTTCACTGGCTTGACCATCGCAGACCAAATTACCCTGCTGAAGGCCGCC
 TGCCTGGACATCCTGATTCTTAGAATTTGCACCAGGTATACCCAGAACAAAGACA
 CCATGACTTTCTCAGACGGCCTTACCCTAAATCGAACTCAGATGCACAATGCTGG
 ATTTGGTCTCTGACTGACCTTGTGTTACCTTTGCCAACCAGCTCCTGCCTTTGG
 AAATGGATGACACAGAAACAGGCCTTCTCAGTGCCATCTGCTTAATCTGTGGAGA
 45 CCGCCAGGACCTTGAGGAACCGACAAAAGTAGATAAGCTACAAGAACCATTGCT
 GGAAGCACTAAAAATTTATATCAGAAAAAGACGACCCAGCAAGCCTCACATGTT
 TCCAAAGATCTTAATGAAAATCACAGATCTCCGTAGCATCAGTGCTAAAGGTGCA
 GAGCGTGTAATTACCTTGAAAATGGAAATTCCTGGATCAATGCCACCTCTCATTC
 AAGAAATGATGGAGAATTCTGAAGGACATGAACCTTGACCCCAAGTTCAAGTG

GGAACACAGCAGAGCACAGTCCTAGCATCTCACCCAGCTCAGTGGAAAACAGTG
 GGGTCAGTCAGTCACCACTCGTGCAATAAGACATTTTCTAGCTACTTCAAACATT
 CCCCAGTACCTTCAGTTCCAGGATTTAAAATGCAAGAAAAAACATTTTACTGCT
 GCTTAGTTTTTGGACTGAAAAGATATTAAGAACTCAAGAAGGACCAAGAAGTTTTC
 5 ATATGTATCAATATATATACTCCTCACTGTGTAACCTACCTAGAAATACAACTTT
 TCCAATTTTAAAAAATCAGCCATTTTCATGCAACCAGAACTAGTTAAAAGCTTCT
 ATTTTCCTCTTTGAACACTCAAGATGCATGGCAAAGACCCAGTCAAAATGATTTA
 CCCCTGGTTAAGTTTCTGAAGACTTTGTACATACAGAAGTATGGCTCTGTTCTTTC
 TATACTGTATGTTTGGTGCTTTCCTTTTGTCTTGCATACTCAAAATAACCATGACA
 10 CCAAGGTTATGAAATAGACTACTGTACACGTCTACCTAGGTTCAAAAAGATAACT
 GTCTTGCTTTCATGGAATAGTCAAGACATCAAGGTAAGGAAACAGGACTATTGA
 CAGGACTATTGTACAGTATGACAAGATAAGGCTGAAGATATTCTACTTTAGTTAG
 TATGGAAGCTTGTCTTTGCTCTTTCTGATGCTCTCAAACCTGCATCTTTTATTTTCATG
 TTGCCCAGTAAAAGTATACAAATTCCTGCACTAGCAGAAGAGAATTCTGTATCA
 15 GTGTAAGTCCAGTTTCAGTTAATCAAATGTCATTTGTTCAATTGTAAATGTCACCTT
 TAAATTAAGAGTGGTTTATTACTTGTTTAATGACATAACTACACAGTTAGTTAAA
 AAAAATTTTTTTTACAGTAATGATAGCCTCCAAGGCAGAAACACTTTTCAGTGTTA
 AGTTTTTGTTTACTTGTTCACAAGCCATTAGGGAAATTTTCATGGGATAATTAGCA
 GGCTGGTCTACCACTGGACCATGTAAGTCTAGTGTCTTCTGATTTCATGCCTGAT
 20 ATTGGGATTTTTTTCCAGCCCTTCTTGATGCCAAGGGCTAATTATATTACATCCCA
 AAGAAACAGGCATAGAATCTGCCTCCTTTGACCTTGTTCATCACTATGAAGCAG
 AGTGAAAGCTGTGGTAGAGTGGTTAACAGATACAAGTGTGAGTTTCTTACTTCTC
 ATTTAAGCACTACTGGAATTTTTTTTTTTGATATATTAGCAAGTCTGTGATGTACT
 TTCAGTGGCTCTGTTTGTACATTTGAGATTGTTTGTTAACAATGCTTTCTATGTTT
 25 ATATACTGTTTACCTTTTTCCATGGACTCTCCTGGCAAAGAATAAAATATATTTAT
 TTT

SEQ ID NO: 595

yr12e06.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205090 3'
 30 similar to gb|M87905|HUMALND184 Human carcinoma cell-derived Alu RNA transcript,
 (rRNA); gb:J03934 NAD(P)H DEHYDROGENASE (HUMAN);contains Alu repetitive
 element;; mRNA sequence
 gi|1010773|gb|H57941.1|H57941[1010773]
 CATAAGCGAAACATGATTTTGGAAATTTTCAGGATGGGGAAAAGAAACAAAATAA
 35 ATTATGGGAGTTTTTTGTGTTTTTTTTTTGAGACTGGCTCTCATTCTCTGTACAT
 GGGCTGGAGTGCAGTAGTGAATCTCAGCTTACTGCAACCTCTGCCTCAAGTGAT
 CCTCCACCTCAGACTCCAGAGTAGCTGGGGAGCACATAAAATTAACATCTA
 AACTCTCATAATGGGTCATTTTGGCAGGGTTCTGCAGGCAAACCTTTTATTTGAAG
 TATTCTTTTTTGTGCTTTGTATTGAAAGTAAAGTTAGGGTAGCNAAGGGGGACTA
 40 CTTCAACCCTGAGGAACACGGCCGNGGAAA
 ACTGCAGGCATATGGATGTTTGTCC

SEQ ID NO: 596

>20244 BLOOD 113392.11 AJ225028 g3892593 Human mRNA for GABA-B R1a receptor.
 45 0
 GGCGCCCTCTCCCCGGTCTTCCCCTCTCTTCCCCCGCCCTGCCTTCCCTTGCACC
 CTCCTTCTTCCCTCCGCCCCGGAGCTCTCCCTGGTCCCCGGCGCCGCTCCTTCCC
 TCCCCGGCTCCCCGCTCCCCGCTCCCGTGGCTGCCGCCGCCCGGGGAAGAAGAGA
 CAGGGGTGGGGTTTGGGGGAAGCGAGAGAGAGGGGAGAGACCCTGGCCAGGC

TGGAGCCTGGATTTCGAGGGGAGGAGGGACGGGAGGAGGAGAAAGGTGGAGGAG
 AAGGGAGGGGGGAGCGGGGAGGAGCGGGCCGGCCTGGGGCCTTGAGGCCCGGG
 GAGAGCCGGGGAGCCGGGCCCCGCGCGCCGAGATGTTGCTGCTGCTGTTACTGGC
 5 GCCACTCTTCCTCCGCCCCCGGGCGCGGGCGGGGCGCAGACCCCCAACGCCAC
 CTCAGAAGGTTGCCAGATCATACACCCGCCCTGGGAAGGGGGCATCAGGTACCG
 GGGCCTGACTCGGGACCAGGTGAAGGCTATCAACTTCCTGCCAGTGGACTATGA
 GATTGAGTATGTGTGCCGGGGGGAGCGCGAGGTGGTGGGGCCCAAGGTCCGCAA
 GTGCCTGGCCAACGGCTCCTGGACAGATATGGACACACCCAGCCGCTGTGTCCG
 10 AATCTGCTCCAAGTCTTATTTGACCCTGGAAAATGGGAAGGTTTTCTTGACGGGT
 GGGGACCTCCCAGCTCTGGACGGAGCCCGGGTGGATTTCCGGTGTGACCCCGACT
 TCCATCTGGTGGGCAGCTCCCGGAGCATCTGTAGTCAGGGCCAGTGGAGCACCCC
 CAAGCCCCACTGCCAGGTGAATCGAACGCCACACTCAGAACGGCGCGCAGTGTA
 CATCGGGGCACTGTTTCCCATGAGCGGGGGCTGGCCAGGGGGCCAGGCCTGCCA
 15 GCGCGCGGTGGAGATGGCGCTGGAGGACGTGAATAGCCGCAGGGGACATCCTGCC
 GGACTIONTATGAGCTCAAGCTCATCCACCACGACAGCAAGTGTGATCCAGGCCAAGC
 CACCAAGTACCTATATGAGCTGCTCTACAACGACCCTATCAAGATCATCCTTATG
 CCTGGCTGCAGCTCTGTCTCCACGCTGGTGGCTGAGGCTGCTAGGATGTGGAACC
 TCATTGTGCTTTCCTATGGCTCCAGCTCACCAGCCCTGTCAAACCGGCAGCGTTTC
 CCCACTTTCTTCCGAACGCACCCATCAGCCACACTCCACAACCCTACCCGCGTGA
 20 AACTCTTTGAAAAGTGGGGCTGGAAGAAGATTGCTACCATCCAGCAGACCACTG
 AGGTCTTCACTTCGACTCTGGACGACCTGGAGGAACGAGTGAAGGAGGCTGGAA
 TTGAGATTACTTTCCGCCAGAGTTTCTTCTCAGATCCAGCTGTGCCCGTCAAAAA
 CCTGAAGCGCCAGGATGCGCGAATCATCGTGGGACTTTTCTATGAGACTGAAGCC
 CGGAAAGTTTTTTGTGAGGTGTACAAGGAGCGTCTCTTTGGGAAGAAGTACGTCT
 25 GGTTCCTCATTGGGTGGTATGCTGACAATTGGTTCAAGATCTACGACCCTTCTATC
 AACTGCACAGTGGATGAGATGACTGAGGCGGTGGAGGGCCACATCACAACCTGAG
 ATTGTCATGCTGAATCCTGCCAATACCCGCAGCATTTCACACATGACATCCCAGG
 AATTTGTGGAGAACTAACCAAGCGACTGAAAAGACACCCTGAGGAGACAGGA
 GGCTTCCAGGAGGCACCGCTGGCCTATGATGCCATCTGGGCCTTGGCACTGGCCC
 30 TGAACAAGACATCTGGAGGAGGCGGCCGTTCTGGTGTGCGCCTGGAGGACTTCA
 ACTACAACAACCAGACCATTACCGACCAAATCTACCGGGCAATGAACTCTTCGTC
 CTTTGAGGGTGTCTCTGGCCATGTGGTGTGTTGATGCCAGCGGCTCTCGGATGGCA
 TGGACGCTTATCGAGCAGCTTCAGGGTGGCAGCTACAAGAAGATTGGCTACTAT
 GACAGCACCAAGGATGATCTTTCCTGGTCCAAAACAGATAAATGGATTGGAGGG
 35 TCCCCCCCAGCTGACCAGACCCTGGTCATCAAGACATTCCGCTTCCTGTACAGA
 AACTCTTTATCTCCGTCTCAGTTCTCTCCAGCCTGGGCATTGTCCTAGCTGTTGTC
 TGTCTGTCTTTAACATCTACAACCTCACATGTCCGTTATATCCAGAACTCACAGCC
 CAACCTGAACAACCTGACTGCTGTGGGCTGCTCACTGGCTTTAGCTGCTGTCTTC
 CCCCTGGGGCTCGATGGTTACCACATTGGGAGGAACCAAGTTTCCTTTCTGTCTGCC
 40 AGGCCCCGCTCTGGCTCCTGGGCCTGGGCTTTAGTCTGGGCTACGGTTCCATGTT
 CACCAAGATTTGGTGGGTCCACACGGTCTTCAAAAGAAGGAAGAAAAGAAGGA
 GTGGAGGAAGACTCTGGAACCCTGGAAGCTGTATGCCACAGTGGGCCTGCTGGT
 GGGCATGGATGTCCTCACTCTCGCCATCTGGCAGATCGTGGACCCTCTGCACCGG
 ACCATTGAGACATTTGCCAAGGAGGAACCTAAGGAAGATATTGACGTCTCTATTC
 45 TGCCCCAGCTGGAGCATTGCAGCTCCAGGAAGATGAATACATGGCTTGGCATTTC
 CTATGGTTACAAGGGGCTGCTGCTGCTGCTGGGAATCTTCCTTGCTTATGAGACC
 AAGAGTGTGTCCACTGAGAAGATCAATGATCACCGGGCTGTGGGCATGGCTATC
 TACAATGTGGCAGTCCTGTGCCTCATCACTGCTCCTGTACCATGATTCTGTCCAG
 CCAGCAGGATGCAGCCTTTGCCTTTGCCTCTCTTGCCATAGTTTTCTCCTCCTATA

TCACTCTTGTTGTGCTCTTTGTGCCCAAGATGCGCAGGCTGATCACCCGAGGGGA
 ATGGCAGTCGGAGGCGCAGGACACCATGAAGACAGGGTCATCGACCAACAACA
 ACGAGGAGGAGAAGTCCCGGCTGTTGGAGAAGGAGAACCGTGAACCTGGAAAAG
 ATCATTGCTGAGAAAGAGGAGCGTGTCTCTGAACTGCGCCATCAACTCCAGTCTC
 5 GGCAGCAGCTCCGCTCCCGGCGCCACCCACCGACACCCCCAGAACCCTCTGGGG
 GCCTGCCCAGGGGACCCCCCTGAGCCCCCGACCGGCTTAGCTGTGATGGGAGTC
 GAGTGCATTTGCTTTATAAGTGAGGGTAGGGTGAGGGAGGACAGGCCAGTAGGG
 GGAGGGAAAGGGAGAGGGGAAGGGCAGGGGACTCAGGAAGCAGGGGGTCCCCA
 TCCCCAGCTGGGAAGAACATGCTATCCAATCTCATCTCTTGTAATACATGTCCC
 10 CCTGTGAGTTCTGGGCTGATTTGGGTCTCTCATACTCTGGGAAACAGACCTTTTT
 CTCTCTTACTGCTTCATGTAATTTGTATCACCTCTTCACAATTTAGTTTCGTACCTG
 GCTTGAAGCTGCTCACTGCTCACACGCTGCCTCCTCAGCAGCCTCACTGCATCTTT
 CTCTTCCCATGCAACACCCTCTTCTAGTTACCAACGGCAACCCCTGCAGCTCCTCTG
 CCTTTGTGCTCTGTTCCCTGTCCAGCAGGGGTCTCCCAACAAGTGCTCTTTCCACCC
 15 CCAAAGGGGCTCTCCTTTTCTCCACTGTCATAATCTCTTTCCATCTTACTTGCCC
 TTCTATACTTTCTCACATGTGGCTCCCCCTGAATTTTGCTTCCTTTGGGAGCTCATT
 CTTTTCGCCAAGGCTCACATGCTCCTTGCTCTGTGCACTCACGCTCAGCA
 CACATGCATCCTCCCCCTCTCCTGCGTGTGCCCACTGAACATGCTCATGTGTACAC
 ACGCTTTTCCCGTATGCTTTCTTCATGTTCAAGTCACATGTGCTCTCGGGTGCCCTG
 20 CATTACAGCTACGTGTGCCCTCTCATGGTCATGGGTCTGCCCTTGAGCGTGTTT
 GGGTAGGCATGTGCAATTTGTCTAGCATGCTGAGTCATGTCTTTCCTATTTGCACA
 TCGTCCATGTTTATCCATGTACTTTCCCTGTGTACCCTCCATGTACCTTGTGTACTTT
 TTTTCTTCCCTTAAATCATGGTATTCTTCTGACAGAGCCATATGTACCCTACCCTGGAGAA
 TTTGTTATGCAGTTTTCCTCAATTCATGTTTGGTGGGGCCATCCACACCCTCTCTT
 25 GTCACAGAATCTCCATTTCTGCTCAGATTCCCCCATCTCCATTGCATTCATGTAC
 TACCCTCAGTCTACACTACAATCATCTTCTCCCAAGACTGCTCCCTTTTGTGTTT
 TGTTTTTTTGAGGGGAATTAAGGAAAAATAAGTGGGGGCAGGTTTGAGAGAGCTG
 CTTCCAGTGGATAGTTGATGAGAATCCTGACCAAAGGAAGGCACCCTTGACTGTT
 GGGATAGACAGATGGACCTATGGGGTGGGAGGTGGTGTCCCTTTCACACTGTGG
 30 TGTCTCTTGGGGAAGGATCTCCCCGAATCTCAATAAACCAGTGAACAGTGTGAAA
 AAACAAAACAAGGGGCGGCCGCGGATTATTG

SEQ ID NO: 597

>20284 BLOOD 1039926.6 X02488 g179595 Human collagen alpha-2 type I mRNA,
 complete cds, clone pHCOL2A1.0

35 GTGTCCCATAGTGTTTCCAAACTTGGAAGGGGCGGGGGAGGGCGGGAGGATGCG
 GAGGGCGGAGGTATGCAGACAACGAGTCAGAGTTTCCCCTTGAAAGCTCAAAAG
 TGTCCACGTCCTCAAAAAGAATGGAACCAATTTAAGAAGCCAGCCCCGTGGCCA
 CGTCCCTTCCCCCATTCGCTCCCTCCTCTGCGCCCCCGCAGGCTCCTCCCAGCTGT
 40 GGCTGCCCCGGGCCCCCAGCCCCAGCCCTCCCATTGGTGGAGGCCCTTTTGGAGGC
 ACCCTAGGGCCAGGGAAACTTTTGCCGTATAAATAGGGCAGATCCGGGCTTTATT
 ATTTTAGCACACGGCAGCAGGAGGTTTCGGCTAAGTTGGAGGTACTGGCCACG
 ACTGCATGCCCGCGCCCGCCAGGTGATACCTCCGCGGTGACCCAGGGGGCTCTG
 CGACACAAGGAGTCTGCATGTCTAAGTGCTAGACATGCTCAGCTTTGTGGATACG
 45 CGGACTTTGTTGCTGCTTGCAGTAACCTTATGCCTAGCAACATGCCAATCTTTACA
 AGAGGAAACTGTAAGAAAGGGCCCAGCCGGAGATAGAGGACCACGTGGAGAAA
 GGGGTCCACCAGGCCCCCCAGGCAGAGATGGTGAAGATGGTCCCACAGGCCCTC
 CTGGTCCACCTGGTCCTCCTGGCCCCCTGGTCTCGGTGGGAACCTTGTGCTCAG
 TATGATGGAAAAGGAGTTGGACTTGGCCCTGGACCAATGGGCTTAATGGGACCT

AGAGGCCACCTGGTGCAGCTGGAGCCCCAGGCCCTCAAGGTTTCCAAGGACCT
GCTGGTGAGCCTGGTGAACCTGGTCAAACCTGGTCCTGCAGGTGCTCGTGGTCCAG
CTGGCCCTCCTGGCAAGGCTGGTGAAGATGGTCACCCTGGGAAAACCCGGACGA
CCTGGTGAGAGAGGAGTTGTTGGACCACAGGGTGCTCGTGGTTTCCCTGGAAGTC
5 CTGGACTTCCTGGCTTCAAAGGCATTAGGGGACACAATGGTCTGGATGGATTGAA
GGGACAGCCCCGGTGCTCCTGGTGTGAAGGGTGAACCTGGTGCCCTGGTGAAAA
TGGAACCTCCAGGTCAAACAGGAGCCCCGTGGGCTTCTGGTGAGAGAGGACGTGT
TGGTGCCCTGGCCCAGCTGGTGCCCGTGGCAGTGATGGAAGTGTGGGTCCCGTG
GGTCCTGCTGGTCCCATTTGGGTCTGCTGGCCCTCCAGGCTTCCCAGGTGCCCTG
10 GCCCCAAGGGTGAAATTGGAGCTGTTGGTAACGCTGGTCCTGCTGGTCCCGCCGG
TCCCCGTGGTGAAGTGGGTCTTCCAGGCCTCTCCGGCCCCGTGGACCTCCTGGT
AATCCTGGAGCAAACGGCCTTACTGGTGCCAAGGGTGCTGCTGGCCTTCCCGGCG
TTGCTGGGGCTCCCGGCCTCCCTGGACCCCGCGGTATTCCTGGCCCTGTTGGTGCT
GCCGGTGCTACTGGTGCCAGAGGACTTGTGGTGAGCCTGGTCCAGCTGGCTCCA
15 AAGGAGAGAGCGGTAACAAGGGTGAGCCCCGGCTCTGCTTGGGCCCCAAGGTCCT
CCTGGTCCCAGTGGTGAAGAAGGAAAGAGAGGCCCTAATGGGGAAGCTGGATCT
GCCGGCCCTCCAGGACCTCCTGGGCTGAGAGGTAGTCCTGGTTCTCGTGGTCTTC
CTGGAGCTGATGGCAGAGCTGGCGTCATGGGCCCTCCTGGTAGTCGTGGTGCAA
GTGGCCCTGCTGGAGTCCGAGGACCTAATGGAGATGCTGGTCGCCCTGGGGAGC
20 CTGGTCTCATGGGACCCAGAGGTCTTCTGGTTCCCTGGAAATATCGGCCCCCGC
TGGAAGAAGGTCCTGTCGGCCTCCCTGGCATCGACGGCAGGCCTGGCCCAAT
TGGCCAGCTGGAGCAAGAGGAGAGCCTGGCAACATTTGGATTCCCTGGAGCCAA
AGGCCCACTGGTGATCCTGGCAAAAAGGGTGATAAAGGTCATGCTGGTCTTGCT
GGTGCTGGGGTGCTCCAGGTCTGATGGAAACAATGGTGCTCAGGGACCTCCTG
25 GACCACAGGGTGTTCAAGGTGGAAAAGGTGAACAGGGTCCCGCTGGTCCTCCAG
GCTTCCAGGGTCTGCCTGGCCCCCTCAGGTCCCGCTGGTGAAGTTGGCAAACCAGG
AGAAAGGGGTCTCCATGGTGAGTTTGGTCTCCCTGGTCCTGCTGGTCCAAGAGGG
GAACGCGGTCCCCCAGGTGAGAGTGGTGCTGCCGGTCCTACTGGTCCTATTGGAA
GCCGAGGTCTTCTGGACCCCCAGGGCCTGATGGAAACAAGGGTGAACCTGGTG
30 TGGTTGGTGCTGTGGGCACTGCTGGTCCATCTGGTCCTAGTGGACTCCCAGGAGA
GAGGGGTGCTGCTGGCATACTGGAGGCAAGGGAGAAAAGGGTGAACCTGGTCT
CAGAGGTGAAATTGGTAACCCTGGCAGAGATGGTGCTCGTGGTGCTCCTGGTGCT
GTAGGTGCCCTGGTCCTGCTGGAGCCACAGGTGACCGGGGCGAAGCTGGGGCT
GCTGGTCCTGCTGGTCCTGCTGGTCCTCGGGGAAGCCCTGGTGAACGTGGTGAGG
35 TCGGTCTGCTGGCCCCAATGGATTTGCTGGTCCTGCTGGTGCTGCTGGTCAACCT
GGTGCTAAAGGAGAAAGAGGAGCCAAAGGGCCTAAGGGTGAACCGGTGTTGT
TGGTCCCACAGGCCCCCGTTGGAGCTGCTGGCCAGCTGGTCCAAATGGTCCCCC
GGTCCTGCTGGAAGTCGTGGTGATGGAGGCCCCCCTGGTATGACTGGTTTCCCTG
GTGCTGCTGGACGGACTGGTCCCCCAGGACCCTCTGGTATTTCTGGCCCTCCTGG
40 TCCCCCTGGTCCTGCTGGGAAAGAAGGGCTTCGTGGTCCTCGTGGTGACCAAGGT
CCAGTTGGCCGAACCTGGAGAAGTAGGTGCAGTTGGTCCCCCTGGCTTCGCTGGTG
AGAAGGGTCCCTCTGGAGAGGCTGGTACTGCTGGACCTCCTGGCACTCCAGGTCC
TCAGGGTCTTCTTGGTGCTCCTGGTATTCTGGGTCTCCCTGGCTCGAGAGGTGAA
CGTGGTCTACCAGGTGTTGCTGGTGCTGTGGGTGAACCTGGTCCTCTTGGCATTG
45 CCGGCCCTCCTGGGGCCCGTGGTCCTCCTGGTGCTGTGGGTAGTCCTGGAGTCAA
CGGTGCTCCTGGTGAAGCTGGTCGTGATGGCAACCCTGGGAACGATGGTCCCCCA
GGTCGCGATGGTCAACCCGGACACAAGGGAGAGCGCGGTTACCCTGGCAATATT
GGTCCCGTTGGTGCTGCAGGTGCACCTGGTCCTCATGGCCCCGTGGGTCTGCTG
GCAAACATGGAAACCGTGGTGAAACTGGTCCTTCTGGTCCTGTTGGTCCTGCTGG

TGCTGTTGGCCCAAGAGGTCCTAGTGGCCACAAGGCATTCGTGGCGATAAGGG
 AGAGCCCGGTGAAAAGGGGCCAGAGGTCTTCCTGGCTTAAAGGGACACAATGG
 ATTGCAAGGTCTGCCTGGTATCGCTGGTCACCATGGTGATCAAGGTGCTCCTGGC
 TCCGTGGGTCCTGCTGGTCCTAGGGGCCCTGCTGGTCCTTCTGGCCCTGCTGGAA
 5 AAGATGGTCGCACTGGACATCCTGGTACAGTTGGACCTGCTGGCATTTCGAGGCC
 TCAGGGTCACCAAGGCCCTGCTGGCCCCCTGGTCCCCCTGGCCCTCCTGGACCT
 CCAGGTGTAAGCGGTGGTGGTTATGACTTTGGTTACGATGGAGACTTCTACAGGG
 CTGACCAGCCTCGCTCAGCACCTTCTCTCAGACCCAAGGACTATGAAGTTGATGC
 TACTCTGAAGTCTCTCAACAACCAGATTGAGACCCTTCTTACTCCTGAAGGCTCT
 10 AGAAAGAACCCAGCTCGCACATGCCGTGACTTGAGACTCAGCCACCCAGAGTGG
 AGCAGTGGTTACTACTGGATTGACCCTAACCAAGGGATGCACTATGGATGCTATC
 AAAGTATACTGTGATTTCTCTACTGGCGAAACCTGTATCCGGGGCCCAACCTGAAA
 ACATCCCAGCCAAGAACTGGTATAGGAGCTCCAAGGACAAGAAACACGTCTGGC
 TAGGAGAACTATCAATGCTGGCAGCCAGTTTGAATATAATGTAGAAGGAGTGA
 15 CTTCCAAGGAAATGGCTACCCAACCTTGCCCTTCATGCGCCTGCTGGCCAACTATGC
 CTCTCAGAACATCACCTACCACTGCAAGAACAGCATTGCATACATGGATGAGGA
 GACTGGCAACCTGAAAAAGGCTGTCATTCTACAGGGCTCTAATGATGTTGAACTT
 GTTGCTGAGGGCAACAGCAGGTTCACTTACACTGTTCTTGTAGATGGCTGCTCTA
 AAAAGACAAATGAATGGGGAAAGACAATCATTGAATACAAAACAAATAAGCCA
 20 TCACGCCTGCCCTTCCTTGATATTGCACCTTTGGACATCGGTGGTGCTGACCAGG
 AATTCTTTGTGGACATTGGCCCAGTCTGTTTCAAATAAATGAACTCAATCTAAAT
 TAAAAAGAAAGAAATTTGAAAAAATTTCTCTTTGCCATTCTTCTCTCTTTT
 TTAAGTGAAGCTGAATCCTTCCATTTCTTCTGACATCTACTTGCTTAAATTGTG
 GGCAAAAGAGAAAAAGAAGGATTGATCAGAGCATTGTGCAATACAGTTTCATTA
 25 ACTCCTTCCCCCGCTCCCCCAAAAATTTGAATTTTTTTTTTCAACACTCTTACACCT
 GTTATGGAAAATGTCAACCTTTGTAAGAAAACCAAAATAAAAATTGAAAAATAA
 AAACCATAAACATTTGCACCACTTGTGGCTTTTGAATATCTTCCACAGAGGGAAG
 TTAAAACCCAAACTTCCAAAGGTTTAACTACCTCAAAACACTTTCCCATGAGT
 GTGATCCACATTGTTAGGTGCTGACCTAGACAGAGATGAACTGAGGTCCTTGTTT
 30 TGTTTTGTTTATAATAACAAGGTGCTAATTAATAGTATTTTCAAGATACTTGAAGAA
 TGTTGATGGTGCTAGAAGAATTTGAGAAGAAATACTCCTGTATTGAGTTGTATCG
 TGTGGTGTATTTTTTAAAAAATTTGATTTAGCATTTCATATTTTCCATCTTATTCCCA
 ATTAAAAGTATGCAGATTATTTGCCCAAAGTTGTCCTCTTCTTCAGATTCAGCATT
 TGTTCTTTGCCAGTCTCATTTTCATCTTCTTCCATGGTTCCACAGAAGCTTTGTTTC
 35 TTGGGCAAGCAGAAAAATTAATTTGTACCTATTTAAACATCTCACATATACAAAA
 TAGGTACAATGTTTAAATAAATTGTGAAAAAAATGAAATAAAGCATGTTTGGTTT
 TCCAAAAGAAAAAAGGGCG

SEQ ID NO: 598

40 >20804 BLOOD 1095729.1 D29990 g484049 Human mRNA for cationic amino acid
 transporter 2, complete cds. 0
 GAATTCGGCTCTCAAATTTTCTATAGAATCAAGATAGAACCTTTAGATGTCTCA
 CCACGAACTAGCAACTGGAATGAAGATAGAAACAAGTGGTTATAACTCAGACA
 AACTAATTTGTCGAGGGTTTATTGGAACACCTGCCCCACCGGTTTGCACANAAG
 45 TTTCTCCTGTCGCCTTCGTCAGACGTCAGAATGATTCCTTGCAGAGCCGCGCTGA
 CCTTTGCCCGATGTCTGATCCGGAGAAAAATCGTGACCCTGGACAGTCTAGAAGA
 CACCAAATTATGCCGCTGCTTATCCACCATGGACCTCATTGCCCTGGGCGTTGGA
 AGCACCTTTGGGGCCGGGGTTTATGTCCTCGCTGGGGAGGTGGCCAAGGCAGAC
 TCGGGCCCCAGCATCGTGGTGTCTTCTCATTGCTGCCCTGGCTTCAGTGATGGC

TGGCCTCTGCTATGCCGAATTTGGGGCCCGTGTTCCTCAAGACGGGGTCTGCATAT
 TTGTACACCTACGTGACTGTCGGAGAGCTGTGGGCCTTCATCACTGGGCTGGAATC
 TCATTTTATCGTATGTGATAGGTACATCAAGTGTGCAAGAGCCTGGAGTGGCAC
 CTTTGATGAACTTCTTAGCAAACAGATTGGTCAGTTTTTTGAGGACATACTTCAGA
 5 ATGAATTACACTGGTCTTGCAGAATATCCCGATTTTTTTTGCTGTGTGCCTTATATT
 ACTTCTAGCAGGTCTTTTGTCTTTTGGAGTAAAAGAGTCTGCTTGGGTGAATAAA
 GTCTTCACAGCTGTTAATATTCTCGTCCTTCTGTTTGTGATGGTTGCTGGGTTTGT
 GAAAGGAAATGTGGCAAACCTGGAAGATTAGTGAAGAGTTTCTCAAAAATATATC
 AGCAAGTGCCAGAGAGCCACCTTCTGAAAACGGAACAAGTATCTATGGGGCTGG
 10 TGGCTTTATGCCTTATGGCTTTACGGGAACGTTGGCTGGTGCTGCAACTTGCTTTT
 ATGCCTTTGTGGGATTTGACTGCATTGCAACAACCTGGTGAAGAAGTTCGGAATCC
 CCAGAAAGCTATTCCCATTTGGAATTGTGACGTCTTTGCTTGTTTGCTTTATGGCCT
 ATTTTGGGGTCTCTGCAGCTTTAACACTTATGATGCCGTACTACCTCCTCGATGAA
 AAAAGCCCCCTTCCTGTAGCGTTTGAATATGTGGGATGGGGTCTGCCAAATATG
 15 TCGTCGCAGCTGGTTCTCTCTGCGCCTTGTCACAAGTCTTCTTGGATCCATTTTC
 CCAATGCCTCGTGTAATCTATGCTATGGCGGAGGATGGGTGCTTTTCAAATGTC
 TAGCTCAAATCAATTCCAAAACGAAGACACCAATAATTGCTACTTTATCATCGGG
 TGCAGTGGCAGCTTTGATGGCCTTTCTGTTTGACCTGAAGGCGCTTGTGGACATG
 ATGTCCATTGGCACACTCATGGCCTACTCTCTGGTGGCAGCCTGTGTTCTCATCCT
 20 CAGGTACCAGCCTGGCTTATCTTACGACCAGCCCAAATGTTCTCCTGAGAAAGAT
 GGTCTGGGATCGTCTCCAGGGTAACCTCGAAGAGTGAGTCCAGGTCACCATGC
 TGCAGAGACAGGGCTTCAGCATGCGGACCCTGTTCTGCCCCCTCCCTTCTGSCAAC
 TACAGCAGTCAGCTTCTCTCGTGAGCTTTCTGGTAGGATTCCTAGCTTTCCCTCGTGT
 TGGGCCTGAGTGTCTTGACCACTTACGGAGTTCATGCCATCACCAGGCTGGAGGC
 25 CTGGAGCCTCGCTCTCCTCGCGCTGTTTCTTGTTCTCTTCGTTGCCATCGTTCTCAC
 CATCTGGAGGCAGCCCCAGAATCAGCAAAAAGTAGCCTTCATGGTTCCATTCTTA
 CCATTTTTGCCAGCGTTCAGCATCTTGGTGAACATTTACTTGATGGTCCAGTTAAG
 TGCAGACACTTGGGTCAGATTTCAGCATTGATGGCAATTGGCTTCCTGATTTAC
 TTTTCTTATGGCATTAGACACAGCCTGGAGGGTTCATCTGAGAGATGAAAACAATG
 30 AAGAAGATGCTTATCCAGACAACGTTTCATGCAGCAGCAGAAGAAAAATCTGCCA
 TTCAAGCAAATGACCATCACCCAAGAAATCTCAGTTACCTTTTCATATTCCATGA
 AAAGACAAGTGAATTCTAACACTTGCAGGAGCAGAGCTGGTCATCGTCTTAGCA
 TACATATCCTACACTGAGTAAACCGTAACGGGATGTCATCAGCATGCTGGGTTGT
 CATGGGTTTGTGCTGCATACATAGTTACCCCTAATTTATACTTACTCATCTGGACAGC
 35 ATCTCCTCAGATGGTGAATTATGTGCACGGGGAAACCTCCTGAGTGGAAAGTTTCA
 TTCATCAGTGATGAATAGCCCCCAAACAGTGGGANNNNNNNNNNNNNNNNNNNNN
 NNNNNNNNNNNNNNNNNNNNNNGCTTGGGAACATGAGTGTTACAAGTTAGCTGGTGT
 TTTACTATTATTGTGTTACATTTTTCCAGTGTCTGTCATTAATCGGTGGCATATACT
 GCACATACTGAAATAGAGCGAAATCACTGAATGTTAAGAGGTTTCATCTAT
 40

SEQ ID NO: 599

>20816 BLOOD 1102307.12 M14058 g179643 Human complement C1r mRNA, complete
 cds. 0

CTTTTGTTTATGCAAATAGTTCATTCCCTCCAACATTCCCTCCGGGAATGGTCCCCC
 45 CTCCACTCCACAGAAAACCTCCCTCCCTGCTGTGCATGACGCGGGCTCCCTCT
 GCACACAGTGCACGAAGACGCTGTCGGGAGAGCCCAGGATTCAACACGGGCCTT
 GAGAAATGTGGCTCTTGACCTCCTGGTGCCGGCCCTGTTCTGAGGGCAGGAGG
 CTCCATTCCCATCCCTCAGAAGTTATTTGGGGAGGTGACTTCCCTCTGTTCCCCA
 AGCCTTACCCAACAACCTTTGAAACAACCACTGTGATCACAGTCCCCACGGGATA

CAGGGTGAAGCTCGTCTTCCAGCAGTTTGACCTGGAGCCTTCTGAAGGCTGCTTC
TATGATTATGTCAAGATCTCTGCTGATAAGAAAAGCCTGGGGAGGTTCTGTGGGC
AACTGGGTCTCCACTGGGCAACCCCCCGGGAAGAAGGAATTTATGTCCCAAG
GGAACAAGATGCTGCTGACCTTCCACACAGACTTCTCCAACGAGGAGAATGGGA
5 CCATCATGTTCTACAAGGGCTTCCTGGCCTACTACCAAGCTGTGGACCTTGATGA
ATGTGCTTCCCGGAGCAAATCAGGGGAGGAGGATCCCCAGCCCCAGTGCCAGCA
CCTGTGTCACAACACTACGTTGGAGGCTACTTCTGTTCCCTGCCGTCCAGGCTATGAG
CTTCAGAAAGACAGGCATTCCCTGCCAGGCTGAGTGCAGCAGCGAGCTGTACACG
GAGGCATCAGGCTACATCTCCAGCCTGGAGTACCCTCGGTCCCTACCCCCCTGACC
10 TGCCTGCAACTACAGCATCCGGGTGGAGCGGGGCTCACCTGCACCTCAAGTT
CCTGGAGCCTTTTGATATTGATGACCACCAGCAAGTAACTGCCCTATGACCAG
CTACAGATCTATGCCAACGGGAAGAACATTGGCGAGTTCTGTGGGAAGCAAAGG
CCCCCGACCTCGACACCAGCAGCAATGCTGTGGATCTGCTGTTCTTCACAGATG
AGTCGGGGGACAGCCGGGGCTGGAAGCTGCGCTACACCACCGAGATCATCAAGT
15 GCCCCAGCCCAAGACCCTAGACGAGTTCACCATCATCCAGAACCTGCAGCCTCA
GTACCAGTTCCGTGACTACTTCATTGCTACCTGCAAGCAAGGCTACCAGCTCATA
GAGGGGAACCAGGTGCTGCATTCCCTTCACAGCTGTCTGCCAGGATGATGGCACGT
GGCATCGTGCCATGCCCAGATGCAAGATCAAGGACTGTGGGCAGCCCCGAAACC
TGCCTAATGGTGACTTCCGTTACACCACCACAATGGGAGTGAACACCTACAAGGC
20 CCGTATCCAGTACTACTGCCATGAGCCATATTACAAGATGCAGACCAGAGCTGGC
AGCAGGGAGTCTGAGCAAGGGGTGTACACCTGCACAGCACAGGGGCATTTGGAAG
AATGAACAGAAGGGAGAGAAGATTCCCTCGGTGCTTGCCAGTGTGTGGGAAGCCC
GTGAACCCCGTGGAAACAGAGGCAGCGCATCATCGGAAGGGCAAAAAGCCAAAGAT
GGGCAACTTCCCCTGGCAGGTGTTCACCAACATCCACGGGCACGGGGGCGGGGC
25 CCTGCTGGGCGACCGCTGGATCCTCACAGCTGCCACACCCCTGTATCCCAAGGAA
CACGAAGCGCAAAGCAACGCCTCTTTGGATGTGTTCCCTGGGCCACACAAATGTG
GAAGAGCTCATGAAGCTAGGAAATCACCCCATCCGCAGGGTCAGCGTCCACCCG
GACTACCGTCAGGATGAGTCCTACAATTTTGAGGGGGACATCGCCCTGCTGGAGC
TGGAATAAGTGTACCCCTGGGTCCCAACCTCCTCCCCATCTGCCTCCCTGACAA
30 CGATACCTTCTACGACCTGGGCTTGATGGGCTATGTCAGTGGCTTCGGGGTCATG
GAGGAGAAGATTGCTCATGACCTCAGGTTTGTCCGTCTGCCCGTAGCTAATCCAC
AGGCCTGTGAGAACTGGCTCCGGGGGAAGAATAGGATGGATGTGTTCTCTCAA
ACATGTTCTGTGCTGGACACCCATCTCTAAAGCAGGACGCCTGCCAGGGGGATA
GTGGGGGCGTTTTTGCAGTAAGGGACCCGAACACTGATCGCTGGGTGGCCACGG
35 GCATCGTGTCTGGGGCATCGGGTGCAGCAGGGGCTATGGCTTCTACACCAAAGT
GCTCAACTACGTGGACTGGATCAAGAAAGAGATGGAGGAGGAGGACTGAGCCC
AGAATTCAGTAGGTTTCGAATCCAGAGAGCAGTGTGGAAAAAAAAAACAACAAA
CAACTGACCAGTTGTTGATAACCACTAAGAGTCTCTATTAATAATTACTGATGCAG
AAAGACCGTGTGTGAAATTCTCTTTCTGTAGTCCCATTTGATGTACTTTACCTGAA
40 ACAACCAAAGGGCCCCCTTTCTTTCTTCTGAGGATTGCAGAGGATATAGTTATCA
ATCTCTAGTTGTCACTTTCTCTTCCACTTTGATACCATTTGGGTGATTGAATATAA
CTTTTCCAAATAAAGTTTATGAGAAATGCCTTATATTTTGTATTTCTGTTTCTA
TTGCATGTAATAGACAACTTTCTCCACATCAAACATCACCATGTNTTTTATAAA
GTCACAGAATAAAATTTCTTGATATTGATGAAATTGTTCTTAAGCAAGGAATAC
45 CAATTTCCGCAACGTTGGATTGAGTCCCCTTATGTCTTCTAAAAGCTATAGTTTAT
ACACTATTTTCAAGCTTAAATTGATTCTACAGGTTTAAAGTGTGGAAAAAATTT
GTCTGAAACATTTTATAAATTTGTTTCCAGCATGAGGTATCTAAAGGATTTAGACC
AGAGGTCTAGATTAAATAACTCTATTTTAAACATTTTAAACCTTTTATTATTAAG

TTCTTTACATTAAAACCATTTNCTTTGTNTAACTTCTTCTTNNCCATCATTGTTTAA
CTTGGGATTAANATTTNGTNTTTAGGTNGGGAAAANATNAGGGGCTTTTGT

SEQ ID NO: 600

5 >20825 BLOOD 1000084.27 AF022375 g3719220 Human vascular endothelial growth
factor mRNA, complete cds. 0

AAGGCCCTTCGGGGCCGGCCACCCTTTCCTACTTCTCCCCCGGACTCCTTGGTA
GTCTGTAGTGGGAGATCCTTGTTGCCGTCCCTTCGCCTCCTTCACCGCCGCAGAC
CCCTTCAAGTTCTAGTCATGCGTGAGTGCATCTCCATCCACGTTGGCCAGGGCTG
10 GTGTCCAGATTGGGCAATGCCTGCTGGGAGCTCTACTGCCTGGAACACGGCATCC
AGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGATTCCT
TCAACACCTTCTTCAGTGAAACGGGTGCTGGCAAGCATGTGCCCCGGGCAGTGTT
TGTAAGCTTGGAACCCACAGTCATTGATGAAGTTCGCACTGGCACTTACCGCCAG
CTCTTCCACCCTGAGCAACTCATCACAGGCAAGGAAGATGCTGCCAATAACTATG
15 CCGAGGGGCACTACACCATTGGCAAGGAGATCATTGACCTCGTGTGGACCGAA
TTCGCAAGCTGGCTGACCAGTGCACCGGTCTTCAGGGCTTCTTGGTTTTCCACAG
CTTTGGTGGGGGAAGTGGTTCTGGGTTCACCTCGCTGCTCATGGAACGTCTCTCA
GTTGATTATGGCAAGAAGTCCAAGCTGGAGTTCTCCATTTACCCGGCGCCCCAGG
TTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCT
20 GGAGCACTCTGATTGTGCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGT
CGTAGAAACCTCGATATCGAGCGCCCAACCTACACTAACCTTAACCGCCTTATTA
GCCAGATTGTGTCCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTT
GACCTGACAGAATTCAGACCAACCTGGTGCCCTAGCCCCGCATCCAGTTCCTCA
TGGCCACATATGCCCTGTCTCTGTCTGAGAAAGCCTACCATGAACAGCTTCTC
25 TGTAGCAGAGATCACCAATGCTTGCTTTGAGCCAGCCAACCAGATGGTGAAATGT
GACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGTGGTGACGTGG
TTCCCAAAGATGTCAATGCTGCCATTGCCACCATCAAAACCAAGCGCAGCATCCA
GTTTGTGGATTGGTGCCCCACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCC
ACTGTGGTGCCTGGTGGAGACCTGGCCAAGGTACAGAGAGCTGTGTGCATGCTG
30 AGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGACCACAAGTTTGAC
CTGATGTATGCCAAGCGTGCCTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGG
AAGGCGAGTTTTTCAGAGGCCCGTGAAGATATGGCTGCCCTTGAGAAGGATTATG
AGGAGGTTGGTGTGGATTCTGTTGAAGGAGAGGGTGAGGAAGAAGGAGAGGAA
TACTAATTATCCATTCCCTTTTGGCCCTGCAGCATGTCATGCTCCCAGAATTTACGC
35 TTCAGCTTAACTGACAGACGTTAAAGCTTTCTGGTTAGATTGTTTTCACTTGGTGA
TCATGTCTTTTCCATGTGTACCTGTAATATTTTTCCATCATATCTCAAAGTAACT
TTGTCGTTGTTTAAAAATAAATATGTACTACGGAATATCTCGAAAACTGCACTA
GAGACAAAGACGTGATGTTAATATCTTTTCCCCACAATTATTACGGATAAACAGT
AGCACCAATAAATAAATGATAACAAATATTAATAAATAAAAAAGGAGAGAGATTT
40 AGTATGTAGAATTCTCTATTTTTTCTTGTTTTGTGTTTTACATATAAAAAACAGAAT
AGCAATGTCTATTTTATCAGAATCACATATATACATAAACATATGTATATATATA
TACACACAAATACAAGTTGCCAATATATATATAGTATGTAGATGTATATTGAAA
CCTTATTTCAAAGGAATGTGTGCTGGGGAGCCAGGGGATCGGGGAGGGCAGAGC
TGAGTGTTAGCAAAAATTAATATCTGTTCAAGATAAGCTAGTGACTGTCACCGAT
45 CAGGGAGAGAGAGATTGGAACATGAATTTTATATACAAAAACCGGTACAAATA
AGAGAGCAAGAGAGAGCAAAAGATACATCTCATAAATAGTTGAAATTAAATATT
AACCAAGAATACTGAAAAAAAACCCTACTCTTTAATTAAATTAAGTGTTTTAAAT
TTCTAATTAAAAAGGGATATTAAATAAGTACCGTATATAAAACACTTTCTCTTT
CTCTGCCTCCACAATGGGCACGTGGATCCTGCCCTGTCTCTCTGGTCCCTTCCTTC

CCTTCCCGAGGCACAGAGAGACAGGGCAGGATCCACGTGCCCATTTGTGGAGGGA
AGGGAAGGACCAGGGGATGGAGGAAGGTCAACCACTCACACACACAACCAG
GTCTCCTGGGGGGACAGAACTAGTGGTTTCAATGGTGTGAGGACATAGGTCCTTT
TAGGCTGCATCCCAGGAAGGGGAGCAGGAAGAGGATGAGGGCGAGTCCCAGGA
5 AGGGGAGCTGTCATGGGCTGCTTCTTCCAACAATGTGTCTCTTCTTTCGCCGGG
ACATCTGCCAGTGGTCTCCTGGGCAACTCAGAAGCAGGTGAGAGTAAGCGAAGG
CCGCCCAGGCTCCTGAATCTTCCAGGCAGTGCCCTGGGGGCGAGATGCGCGTGC
AGCATGTGGAGGGAATCCCCAAAGCACAGCAATGTCCTGAAGCTCCCCAACTC
CTGGTCAGAGCCGGTGTCTCATCCCTGTACCTGTGATCTGTCTTTCTGTCCGTCT
10 GACCTGGGGTAGAGAGGCTCAGCGCCAGGGCTGGGTTTGTGGTGTTCCTCAAAA
CTGGGTCAATTTGCCCCCATGCCCTGGCCTTGACATTCTGGGCAGGGGAGAG
GACCCTGGCCCCACCAAGTGGGACAAAAAAGATCATGCCAGAGTCTCTCATC
TCCTCCTCTTCCCTGTCAGGATCTGAGTGGGAACATTCCCCTCCCAACTCAAGTCC
ACAGCAGTCAAATACATCCAGTGAAGACACCAATAACATTAGCACTGTTAATTTA
15 AAAAAAGAATATATATATTTTATATATATAAAATAGAGATATTTATTTTATATA
TATATAATATATATATATATAAAATGTATGTATGTGGGTGGGTGTGTCTACAGGAA
TCCCAGAAATAAACTCTCTAATCTTCCGGGCTCGGTGATTTAGCAGCAAGAAAA
ATAAAATGGCGAATCCAATTCCAAGAGGGACCGTGCTGGGTACCCGCCCGGGA
ATGCTTCCGCCGGAGTCTCGCCCTCCGGACCCAAAGTGCTCTGCGCAGAGTCTCC
20 TCTTCCTTCATTTAGGTTTCTGGATTAAGGACTGTTCTGTGATGGTGATGGTGT
GGTGGCGGCAGCGTGGTTTCTGTATCGATCGTTCTGTATCAGTCTTCTCCTGGTGAG
AGATCTGGTTCGGAAACCCTGAGGGAGGGCTCCTTCTCCTGCCCGGCTCACCGC
CTCGGCTTGTACATCTGCAAGTACGTTGTTTAACTCAAGCTGCCTCGCCTTGCA
ACGCGAGTCTGTGTTTTTGCAGGAACATTTACAGTCTGCGGATCTTGTAACAAAC
25 AAATGCTTTCTCCGCTCTGAGCAAGGCCACAGGGATTTTCTTGCTCTGCTCTATC
TTTCTTTGGTCTGCATTCACATTTGTTGTGCTGTAGGAAGCTCATCTCTCCTATGT
GCTGGCCTTGGTGAGGTTTGATCCGCATAATCTGCATGGTGATGTTGGACTCCTC
AGTGGGCACACACTCCAGGCCCTCGTCATTGCAGCAGCCCCCGCATCGCATCAGG
GGCACACAGGATGGCTTGAAGATGTACTCGATCTCATCAGGGTACTCCTGGAAG
30 ATGTCCACCAGGGTCTCGATTGGATGGCAGTAGCTGCGCTGATAGACATCCATGA
ACTTCACCACTTCGTGATGATTCTGCCCTCCTCCTTCTGCCATGGGTGCAGCCTGG
GACCACTTGGCATGGTGGAGGTAGAGCAGCAAGGCAAGGCTCCAATGCACCCAA
GACAGCAGAAAGTTCATGGTTTCGGAGGCCCGACCGGGGCGCGCGGCTCGCG
CTCCCTCTCCGGCTCGGGCTGTGGGGCGGCCCGCTCTCCTCGGCGCCTCGGCGAG
35 CTACTCTTCTCCCGGCCCGAGGCCCGGGCCAGGGCCTGGGGAGCGCGCGCGG
CTGGAGCACTGTCTGCGCACACCGCCGCTCACCCGTCCATGAGCCCGGCTTCCG
AGCGCCGAGTCGCCACTGCGGCCCTCTCCTCTTCTTCTTCTTCTCCTCCTCCC
CCTCCTCCGGCTGCGGCTCCTCCCGGCCCGAGCTAGCACTTCTCGCGGCTCCGCT
CGGCTCGGCTTCCCCCGCGCGGACACGGCTCCTCCGAAGCGAGAACAGCCCAG
40 AAGTTGGACGAAAAGTTTCAGTGCGACGCCGCGAGCCCCGACCCCTCCACCCC
GCCTCCGGGCGCGGGCTCCGGCCCCCTGCCGCGGCTCGCCGCCGCGTCCACTGTC
CGCCGCCGCGCGGGGAGGAGGTGGTAGCTGGGGCTGGGGGCGGNNNNNNNNNN
NNNNNNNNNNNNNCGCGACTGGTCAGCTGCGGGATCCCAAGGGGGAGGGCTCAC
GCCGCGCTCCGGCGGTACCCCCAAAAGCAGGTCACTCACTTTGCCCTGTGCT
45 TTCGCTGCTCGCACGCCCCGCGCGCTCTCTCTGACCCCGTCTCTCTTCTCCTCGACT
TCTCTCTGGAGCTCTTGCTACCTCTTCTCTTTCTGCTGGTTTCCAAAATCCACA
GTGATTTGGGGAAGTAGAGCAATCTCCCCAAGCGTCGGCCCGATTCAAGTGGG
GAATGGCAAGCAAAAATAAATTAACGAGAAACAATACAGTTTTAAAAAAA
ATGTTTAAGAAAAAAGAAGAGGGATAAAACCCGGATCAATGAATATCAATTC

AGCACCGAGCGCCCTGGCCGGTGAGTCCGCTGACCGGTCCACCTAACCGCTGCG
CCTCCCGACAGAGCGCTGGTGCTAGCCCCAGCGCCACGACCTCCGAGCTACCCG
GCTGCCCAAG

5 SEQ ID NO: 601

>20881 BLOOD GB_R98877 gi|985478|gb|R98877|R98877 yq67f04.r1 Soares fetal liver
spleen 1NFLS Homo sapiens cDNA clone IMAGE:200863 5' similar to contains Alu
repetitive element; mRNA sequence [Homo sapiens]

GCTTTTATACACAACGTTTTTGTAGGCATCACAGTTTTGCAACCTCTGCTCCAAA
10 GAGAAACATAGAATGAGTTTTCTTTCTTTTTTTTTTTTGGAGTCAGAGTCTCGC
TCTCTTGTCCAGGNTGGAGTGCAATAGCGCGATCTGGGCTCACTGCAACCTCCGC
CTCCCTGGTTCAAGCAATTCTCCTGCCTTGCCTCCTGAGTAGCTGGGATTACAGG
CGTGTGTCACCACGCTTCGGCTAATTTTTGTATTTTAGTAGAGGCAGGGTTTCAC
CATGTCAAGCTGGTTCTTNGGACTCCCTGACGTCGTGATCCACCCGCCTTNGCCTT
15 CCCAAAGTACTGGGGATTACAGGTNTGACATCTTTTNGCCCGNTCCGTTTTTCTTN
AAAGTNGAGGCTTTAAATTTCTNGAACTCTTAGGTGNATTTTCAT

SEQ ID NO: 602

>20921 BLOOD 478620.65 S62138 g386158 TLS/CHOP=hybrid gene {translocation
breakpoint} [Human, myxoid liposarcomas cells, mRNA Mutant, 1682 nt]. 0

GAATTCAGGCGTCGGTGCTCAGCGGTGTTGGAACCTTCGTTGGCTTGCTTGCCCTG
10 TGGGGCGGTGCGCGGACATGGCCTCAAACGGTAGATTATACCCAACAAGCAACC
CAAAGCTATGGGGCCTACCCACCCAGGCGGGGAGGGCTATTCCGAGCAGAGG
AGTCAGCCCTACGGACAGCAGAGTACAGTGGTTATAGCCAGTCCACGGACA
25 TCAGGCTATGGCCAGAGCAGCTATTCTTCTTATGGCCAGAGCCAGAACACAGGCT
ATGGAACCTCAGTCAACTCCCCAGGGATATGGCTCGACTGGCGGCTATGGCAGTA
GCCAGAGCTCCCAATCGTCTTACGGGCAGCAGTCCTCCTATCCTGGCTATGGCCA
GCAGCCAGCTCCCAGCAGCACCTCGGGAAGTTACGGTAGCAGTTCTCAGAGCAG
CAGCTATGGGCAGCCCCAGAGTGGGAGCTACAGCCAGCAGCCTAGCTATGGTGG
30 ACAGCAGCAAAGCTATGGACAGCAGCAAAGCTATAATCCCCCTCAGGGCTATGG
ACAGCAGAACCAGTACAACAGCAGCAGTGGTGGTGGAGGTGGAGGTGGAGGTG
GAGGTAACCTATGGCCAAGATCAATCCTCCATGAGTAGTGGTGGTGGCAGTGGTG
GCGGTTATGGCAATCAAGACCAGAGTGGTGGAGGTGGCAGCGGTGGCTATGGAC
AGCAGGACCGTGGAGGCCGCGGCAGGGGTGGCAGTGGTGGCGGCGGGGCGGCG
35 GCGGTGGTGGTTACAACCGCAGCAGTGGTGGCTATGAACCCAGAGGTCTGGAG
GTGGCCGTGGAGGCAGAGGTGGCATGGGCGGAAGTGACCGTGGTGGCTTCAATA
AATTTGGTGTGTTCAAGAAGGAAGTGTATCTTCATACATCACCACACCTGAAAGC
AGATGTGCTTTTCCAGACTGATCCAATGCAGAGATGGCAGCTGAGTCATTGCCT
TTCTCCTTCGGGACACTGTCCAGCTGGGAGCTGGAAGCCTGGTATGAGGACCTGC
40 AAGAGGTCTGTCTTCAGATGAAAATGGGGGTACCTATGTTTCACCTCCTGGAAA
TGAAGAGGAAGAATCAAAAATCTTCACCACTCTTGACCCTGCTTCTCTGGCTTGG
CTGACTGAGGAGGAGCCAGAACCAGCAGAGGTCACAAGCACCTCCCAGAGCCCT
CACTCTCCAGATTCCAGTCAGAGCTCCCTGGCTCAGGAGGAAGAGGAGGAAGAC
CAAGGGAGAACCAGGAAACGGAAACAGAGTGGTCATTCCCCAGCCCGGGCTGG
45 AAAGCAGCGCATGAAGGAGAAAGAACAGGAGAATGAAAGGAAAGTGGCACAGC
TAGCTGAAGAGAATGAACGGCTCAAGCAGGAAATCGAGCGCCTGACCAGGGAA
GTAGAGGCGACTCGCCGAGCTCTGATTGACCGAATGGTGAATCTGCACCAAGCA
TGAACAATTGGGAGCATCAGTCCCCCACTTGGGCCACACTACCCACCTTTCCAG
AAGTGGCTACTGACTACCCTCTCACTAGTGCCAATGATGTGACCCTCAATCCAC

ATACGCAGGGGGAAGGCTTGGAGTAGACAAAAGGAAAGGTCTCAGCTTGTATAT
 AGAGATTGTACATTTATTTATTACTGTCCCTATCTATTAAAGTGACTTTCTATGAG
 CCAAGGTCTTTTACTTTTTCTTCTTGCCTTTAGGGGCTTCAGGGGGTTTCCCCTCA
 GCTACAGCCAACTGTTTCTTTAGATCCAAGAGTTTCGCCACCTCCGCAGCAACCT
 5 CGTTCTTGTCTGCCTTTTGTGCTTTCAGTTCTCGGACAATGTTTCCCTAAGATAAA
 GGGGGGTGGGGAGGTAACAGTGAGGCAAGAAAAAGATCTATTTAGGATTCAGCT
 TGTCCAGTCTCCACAGGGCTTAAGCTTCATACTTGTTTTGTCACTTCATCCATCA
 GCGCTTGTATCTGCTGTGGCTTGGCTGTTGTAACAGTCTCTACAACCTGCTGGCTTC
 GGGGACGTTTTGCCTGGAGAACAACAAAGTTATCACCAGCAACCATAAATATCC
 10 CCTAACCTCCAGTTTTATACAGCATCTCAGAGGGAAAGTGGTTACCTTTAAGTCG
 AAGGTCTCTTCTAGTTAAGACAGGAAAGAAAAACTGTAAGTGAGGAAGCGGCAG
 GGCCAAAAGATGGAAAGAGTGATGGGTGAGGACTACTTAGGGAAATTAGGGAA
 GTGATGCTGTGGCTGTTGTGGAGCGAGGGCACAGCCTTTAGCTTTCTCACCTGGC
 CCCCTCCAAAGCGCTGCCTTAAACTTTCAATCTGGTCATTTTCCAATTTTGGAAAC
 15 AAGGGACTGACCTGTAAAAAAAGAGTTCAGAATCATCTACTGATTGGATACAG
 ACTCTACCATAGACTATACAGATGACCTCTCCAACCCCAATCTCTGATGTGTTTTA
 GAAAGAACGAGCTTAACACTGAGCTAATATCTGCTGATTTTAGGAAATTAGCTGT
 AGCTTTCCCTGTGAAACCCCAAATAATTTGTAGGGTCAAAGATTCTTTAAGCTCT
 CTAAGGATGCTAGGCTGATCCAGAAGTTTAGCAATGTACTTACTTTTTCATTTTGT
 20 GTCAAAGAGGAAATGGCTTTCCTGTATTTCCCTGCCCACTATCTGCTAGCATTAT
 GGAGACTAGGTGATCACAGTGTTTCTTCAAATATCTGTTTACCAGTTAGTTTTGTG
 TGCCAGGTTCTGGTTTCTGGCATGAAGAACAATGAAGATGTACAGATAATTCCGG
 ACTTGTGAACGACTACCAAGGAGTTTATATCAGAACTTAGGAGTCCCATGACCA
 AAGTAAGACTGGAGAGATGTTAGGTCTTCTCTCACCCACTCCAAAGCTGCATGG
 25 CAAGAGTATCAATTTTAAGAGAGGCTGGCTCTTCCACCTACTGTGCCAATCTGGT
 GTCCTGCTGGTAAGGTACACAGGAAGTTTGTGAGCAGGATACTGCAGGCTGGAG
 GTGGGAGCTGCAGCTGGGCTGGATTGTGGCACTAACCGTGGGCATGTAAGGCT
 GAAG

30 SEQ ID NO: 603

>20929 BLOOD 896499.1 X60111 g34768 Human mRNA for MRP-1. 0

AAGTGCAGGAAGCGCTTGGGGACTGCCAGCCCTCAGCTGTGTTATTATTCGGTG
 ATAGGTATTTGCTAATTACTTCCAAAAGCCTCCCATCTGTCATCCCACCCAGACT
 GCGCGCTTCTAATTCCTCCTACCCACATGCTGTGCCCAATGAAAAGTATGGTCA
 35 GCGAGCGAAGGTTTGCAAGGAGACAGACGAGGGCGAAATTAAGCCAGGCGGCT
 TCCCTTTAAATCCTCGCAAAGCAGAAGGGCCCCCTCACTCTGGCAGCAGGCCTTGG
 CCAAGGGGCTTTAGCCCTGACGACCCGGGGAAGAGTCTCCCAAAGCAGAACGC
 CCGGTCCGGCGCCCAGACCAAACGCGGGGGAACCGGAAGGGCGAGGCCTCCACC
 TTGCCGGGATTGCTGTCCCTTGCCATTGGACTATGGCTCCGATTGCACTCTCAGACC
 40 AAGAGCATCTTCGAGCAAGAACTAATAATAATAATTCCAGCTTCTACACAGGA
 GTCTATATTCTGATCGGAGCCGGCGCCCTCATGATGCTGGTGGGCTTCCTGGGCT
 GCTGCGGGGCTGTGCAGGAGTCCAGTGCATGCTGGGACTGTTCTTCGGCTTCCT
 CTTGGTGATATTCGCCATTGAAATAGCTGCGGCCATCTGGGGATATTCCCACAAG
 GATGAGGTGATTAAGGAAGCCAGGAGTTTACAAGGACACCTACAACAAGCTGA
 45 AAACCAAGGATGAGCCCCAGCGGGAAACGCTGAAAGCCATCCACTATGCGTTGA
 ACTGCTGTGGTTTGGCTGGGGGCGTGGAACAGTTTATCTCAGACATCTGCCCCAA
 GAAGGACGTACTCGAAACCTTCACCGTGAAGGTAACTCAGACCAGGATCCTGG
 TGTCCCTGCCCCCATTTGCTCTGGACAAACCCTGCAAGCATGAAAGTGACAGCAGC
 CAAGTGCTGCTTCAGCAAGACCCGTTCTGCCTGTGAAAGGGCCCCAGGGCACCC

ATCTCTTTCTCTCCCACTTTGGGCCCTCTGTTTACTCAAGGGCAATAAAACAAAG
 GCCGGACCAGGGGAATGACAAGTGTTCTGGCACCGCCCACTGCTGCCAGCCCGG
 AAGCTCTCAAGGGCAGGCGTGCTTCTGAGTCTTGGACTCCCACTCTGACTTTGTC
 AGTGGCTCCTGTCTGTAAGCCAGAGTTAATGTCCAACCTCCAGAATAGTAAAAGGT
 5 GACCTTACAACCATGTCAGAAATAGACCCCAAGCAGGGCTGTCCCTCCTCCTTC
 CCTGACGTCCTGCCAGATTTTAGGGATCCACTAGCATAGCCATCCCTTTGTTTCGC
 CTTTTCATCCACCAGCCAGAACTTCTCTTATCCCCGAACACTCCTGTCCCCAGCCC
 ACCCTCTGCCACCAGTTCTCCCGGGTGAGACGGGGGCCATGGGAGGGAGGAGG
 TGCCCTGGGAGGAAGGATTGTGTGTGACCCAGGTCTTGGTTTGTCTCCCAAGTC
 10 CTGTCCTGATGCCATCAAAGAGGTCTTCGACAATAAATTCCACATCATCGGCGCA
 GTGGGCATCGGCATTGCCGTGGTCATGATATTTGGCATGATCTTCAGTATGATCT
 TGTGCTGTGCTATCCGCAGGAACCGCGAGATGGTCTAGAGTCAGCTTACTTTCCT
 GGTCAGGGATGTAAGCTGACTCTAGACCAGGAAAGTTTACCCATGAAGATTGNN
 NNN
 15 NNN
 CTTTATGTTTGTCTTTTAAATGCTTCATTCAATATTGACATTTGTAGTTGAGCGGGG
 GGTTTGGTTTGTCTTGGTTTATATTTTTTTCAGTTGTTTGTCTTTGCTTGTATATTA
 AGCAGAAATCCTGCAATGAAAGGTACTATATTTGCTAGACTCTAGACAAGATATT
 GTACATAAAAGAATTTTTTTGTCTTTAAATAGATACAAATGTCTATCAACTTTAAT
 20 CAAGTTGTAACCTTATATTGAAGACAATTTGATACATAATAAAAAATTATGACAAT
 GTCCTGG

SEQ ID NO: 604
 >20937 BLOOD 476760.8 AF030455 g3169829 Human epithelial V-like antigen precursor

25 (EVA) mRNA, complete cds. 0

GGCAGAGCGGGCTGAGTCACAGGCACAGGTGAGGAATCAACTCAAACCTCCTCTC
 TCTGGGAAAACGCGGTGCTTGCTCCTCCCGGAGTGGCCTTGGCAGGGTGTGGAG
 CCCTCGGTCTGCCCCGTCCGGTCTCTGGGGCCAAGGCTGGGTTTCCCTCATGTAT
 GGCAAGAGCTCTACTCGTGCGGTGCTTCTTCTCCTTGGCATAACAGCTCACAGCTC
 30 TTTGGCCTATAGCAGCTGTGGAAATTTATACCTCCCGGGTGCTGGAGGCTGTAA
 TGGGACAGATGCTCGGTTAAATGCACTTTCTCCAGCTTTGCCCTGTGGGTGAT
 GCTCTAACAGTGACCTGGAATTTTCGTCCTCTAGACGGGGGACCTGAGCAGTTTG
 TATTCTACTACCACATAGATCCCTTCCAACCCATGAGTGGGCGGTTTAAGGACCG
 GGTGTCTTGGGATGGGAATCCTGAGCGGTACGATGCCTCCATCCTTCTCTGGAAA
 35 CTGCAGTTCGACGACAATGGGACATACACCTGCCAGGTGAAGAACCCACCTGAT
 GTTGATGGGGTGATAGGGGAGATCCGGCTCAGCGTCGTGCACACTGTACGCTTCT
 CTGAGATCCACTTCCTGGCTCTGGCCATTGGCTCTGCCTGTGCACTGATGATCATA
 ATAGTAATTGTAGTGGTCCTCTTCCAGCATTACCGGAAAAAGCGATGGGCCGAA
 AGAGCTCATAAAGTGGTGGAGATAAAATCAAAAGAAGAGGAAAGGCTCAACCA
 40 AGAGAAAAAGGTCTCTGTTTATTTAGAAGACACAGACTAACAATTTTAGATGGA
 AGCTGAGATGATTTCCAAGAACAAGAACCTAGTATTTCTTGAAGTTAATGGAAA
 CTTTTCTTTGGCTTTTCCAGTTGTGACCCGTTTTCCAACCAGTTCTGCAGCATATT
 AGATTCTAGACAAGCAACACCCCTCTGGAGCCAGCACAGTGCTCCTCCATATCAC
 CAGTCATACACAGCCTCATTATTAAGGTCTTATTTAATTTTCAGAGTGTAATTTTT
 45 TCAAGTGCTCATTAGGTTTTATAACAAGAAGCTACATTTTTGCCCTTAAGATAC
 TACTTACAGTGTTATGACTTGTATACACATATATTGGTATCAAAAGGGATAAAAG
 CCAATTTGTCTGTTACATTTCTTTACAGTATTTCTTTTAGCAGCACTTCTGCTACT
 AAAGTTAATGTGTTTACTCTTTCTTCCACATTCTCAATTAAGGTGAGCTA
 AGCCTCCTCGGTGTTTCTGATTAAACAGTAAATCCTAAATTCAAACCTGTAAATGA

CATTTTATTTTATGTCTCTCCTTAACTATGAGACACATCTTGTTTTACTGAATTT
 CTTTCAATATTCCAGGTGATAGATTTTTGTTGTTTTGTTAATTAATCCAAGATTTA
 CAATAGCACAAACGCTAAATCACACAGTAACTACAAAAGGTTACATAGATATGAA
 AAGATTGGCAGAGGCCATTGCAGGATGAATCACTTGTCACCTTTCTTCTGTGCTG
 5 GGAAAAATAATCAACAATGTGGGTCTTTCATGAGCAGTGACGGATAGTTTAGCTT
 ACTATGTTTCCCCCCAATTCAATGATCTATAACAACAGAGCAAAGTCTATGCTC
 ATTTGCAGACTGGAATCATTAAAGTAATTTAATAAAAAGATTGTGAAACAGCATAT
 TACAAGTTTGAAAATTCAGGGCTGGTGAAAAAATCAACTCTAAATGATGATA
 ATTTTGTACAGTTTTATATAAACTCTGAGAACTAGAAGAAATTATTAACTTTTTT
 10 TCTTTTTTAATTCTAATTCACCTGTTTATTTTGGGGGAGGAAGACTTTGGTATGGA
 GCAAAGAAATACCAAACTACTTTAAATGGAATAAAACCAACTTTATTCTTTTTT
 TCCCCATACTGGTAGATAAAGCAAACCTTTATAAGTGGGCTATTGAAAGAAAAG
 TTACAAGCTTAAGATACAGAAGCATTGTTCAAAGGATAGAAAGCATCTAAAAG
 TTTAGGCTCAAGATCAATCTTTACAGATTGATATTTTCAGTTTTTAATCGACTGGA
 15 CTGCAGATGTTTTTCTTTTAACAACTGGAATTTTCAAACAGATTATCTGTATTT
 AAATGTATAGACCTTGATATTTTTCCAATACTATTTTTTAAAAAATTGTATGATTT
 ACATATGAACCTCAGTTCTGAAATTCATTACATATCTGTCTCATTCTGCCTTTTAT
 ACTGTCTAAAAAAGCAAAGTTTTAAAGTGCAATTTTAAACTGTAAATTACATCT
 GAAGGCTATATATCCTTTAATCACATTTTATATTTTTTCTTCACAATTCTAACCTTT
 20 GAAAATATTATAACTGGATATTTCTTCAAACAGATGTCCTGGATGATGGTCCATA
 AGAATAATGAAGAAGTAGTTAAAAATGTATGGACAGTTTTTCCGGCAAAATTTGT
 AGCTTATGTCTTGGCTAAATAGTCAAGGGGTAAATATGGGCCTGTTGTTTAGTGTC
 TCCTTCCTAAAGAGCACTTTTGTATTGTAATTTATTTTATTATGCTTTAAACACT
 ATGTAAATAAACCTTTAGTAATAAGAATTATCAGTTATAT

SEQ ID NO: 605

>20969 BLOOD INCYTE_3358822T6

TTATACTCTGATTGCTCACTTACAGTATAAAATATTCACCCCGCTAAATAAATAA
 GACGACATTATTGCAAACGGCACTTAAACCCCCCTGAGAGATAAGACCTCCCTT
 30 AGCTCAGGCAGGGGGTGCTCCTGAGTTTCTGTGTGAGATTCCCCAAGCACAGATA
 TACTCTGGGGGCTGAGATGGACAAAGGCTTGGGAAACCGCACTTTGTGCTTCTGG
 TCCTGCAGTAGCTCCAAACAGGGTTGTGGAGCTGGTGGGGAAAGTTGGGGGTAG
 GGGAAAGTTGGGGGTAGGGGAAATTTTGGGCAGTGCCTTCATCAGCCNGTCCT
 AGAGAGAGTAGAGGGGAATGGAAGTGGGGGGAACCNNTGGGGNCAAGAGAA
 35 GAGGGGNNGT

SEQ ID NO: 606

>20988 BLOOD 233843.3 AK001972 g7023569 Human cDNA FLJ11110 fis, clone

PLACE1005921, weakly similar to AIG1 PROTEIN. 0

ATCAGGTGGGCAGGTCCCTTGACAAAGTAAATCTGGACAGCTCCTCCCCTCACTT
 CCTCTCTTCTCCTGTTTCTCAACATCCTGGCTTAGTATTGTGTGCAAAATCAGAGA
 GGGGTGCAAGATCCTGATTTTTTCAGGAGTTCAAGCGACAATGGCAGCCCAATAC
 GGCAGTATGAGCTTCAACCCAGCACACCAGGGGCCAGTTATGGGCCTGGAAGG
 CAAGAGCCCAGAAATTCCCAATTGAGAATTGTGTTAGTGGGTAAAACCGGAGCA
 45 GGAAAAAGTGCAACAGGAAACAGCATCCTTGGCCGGAAAGTGTTTCATTCTGGC
 ACTGCAGCAAAATCCATTACCAAGAAGTGTGAGAAACGCAGCAGCTCATGGAAG
 GAAACAGAACTTGTCGTAGTTGACACACCAGGCATTTTCGACACAGAGGTGCCC
 AATGCTGAAACGTCCAAGGAGATTATTCGCTGCATTCTTCTGACCTCCCAGGGC
 CTCATGCTCTGCTTCTGGTGGTTCCACTGGGCCGTTACACTGAGGAAGAGCACAA

AGCCACAGAGAAGATCCTGAAAATGTTTGGAGAGAGGGCTAGAAGTTTCATGAT
TCTCATATTCACCCGGAAAGATGACTTAGGTGACACCAATTTGCGATGACTACTTA
AGGGAAGCTCCAGAAGACATTCAAGACTTGATGGACATTTTTCGGTGACCGCTACT
GTGCGTTAAACAACAAGGCAACAGGCGCTGAGCAGGAGGCCAGAGGGGCACAG
5 TTGCTGGGCTGATCCAGCGCGTGGTGAGGGAGAACAAGGAAGGCTGCTACACT
AATAGGATGTACCAAAGGGCGGAGGAGGAGATCCAGAAGCAAACACAAGCAAT
GCAAGAACTCCACAGAGTGGAGCTGGAGAGAGAGAGAAAGCGCGGATAAGAGAGG
AGTATGAAGAGAAAATCAGAAAGCTGGAAGATAAAGTGGAGCAGGAAAAGAGA
AAGAAGCAAATGGAGAAGAACTAGCAGAACAGGAGGCTCACTATGCTGTAAG
10 GCAGCAAAGGGCAAGAACGGAAGTGGAGAGTAAGGATGGGATACTTGAATTAA
TCATGACAGCGTTACAGATTGCTTCCTTTATTTTGTACGCTCTGTTTCGCGGAAGAT
TAACTTAATGAAAATCTGTTTGTATTTTCTGCATATTCTCTGGCAACCTTGCCCC
ATACTTACTTATTTAGCATAGTCGAGTGCTCTAGTTTCTGTCTCTCAGGCACTCGT
AACTAAGGACCACCATTTGGCCATTGGTAGATGTTTGATTGACTTAACAAGAGAG
15 GGACAAATTTTCAATTTGTGAAACTCCAAAGCAGAAAGTATTGGTGCTTGCTACC
TTGTGAATTCTTCTTAGACATGCAGAGAAAATGTATGCAAGAGACCAAAAAGA
TGGCTCCAAGCTATGTCATGTTACCTGTAATAAAATCTTTTCTTCTAGATTCTTTC
TATGTTGGCAGATAATCTCCCCTTGTAGCTTCCACTCACTTATTCTTGCATTTCAGA
GTCACAATGATCATCTTACCCATGTGGTTTTTGGAGAAAGAAAGATCAATTCTTTG
20 TTTGCAGTAGGTAATCTTAGAGATGGAGATGATTGTAGAATTATTCCTAGATGAG
TGTCATTTTATTTAATTCCATTGTCATATAAGGAGTCAAATTGTTTCTTATCATTT
GTTTCAATTGAAGAACAGAGACCTGTCTGGAAAATCGATCTCTACAAATTCAATTAA
ATAATGATCCCCAAATGCTGAAAAAGTGAAATACAGCAATTCAACAGATAATAG
AGCAATGTTTAGTATATTCAGCTGTATCTGTAGAAACTCTTTGACGAACCTCAAT
25 TTAACCAATTTGATGAATACCCAGTTCTCTTCTTTTCTAGAGAAAGATAGTTGCA
ACCTCACCTCCCTCACTCAACACTTTGAATACTTATTGTTTGGCAGGTCATCCACA
CACTTCTGCCCCCACTGCATTGAATTTTTTGCTTATGTTGTTTATAATAAAACTTTT
CAATTATCTCATAAAA

30 SEQ ID NO: 607

>21053 BLOOD INCYTE_g1967662

GCATTTCCCTGAAACCTGGGCTCTTGAAGACGCATCACTGGAGCAGATGGATAAT
GGAGACTGGGGCNN
NN
35 NNNNNNNNNNNNNCTGACCCAGTCACATTAAATGTAGGTGGACACTTGTATACAAC
GTCTCTCACCACATTGACGCGTTACCCGGATTCCATGCTTGGAGCTATGTTTGGG
GGGGACTTCCCCACAGCTCGAGACCCTCAAGGCAATTACTTTATTGATCGAGATG
GACCTCTTTTCCGATATGTCCTCAACTTCTTAAGAACTTCAGAATTGACCTTACCG
TTGGATTTT

40

SEQ ID NO: 608

>21057 BLOOD INCYTE_g819904

TTTTTTTTGAAGGTAGCAGTGCTTTTATTTACTTTTTATTGTCATCAAGCAGTTTTT
TAGGAATTTTCAGCAAAATACCAATTCAGCTATAAGTCTAATATGAAACACAGG
45 AACTGTGAATATAAGCTTTTGGTGCTTGCTATGGAAAAATCAAATCAATAGCTTT
AATGTCTTCTTACAATCTCATTTTGTTCCTACTATAGCTCTGTTTGTAGTTAGNATCTG
CACATCTGTTTGTCTCCAGGGTAGTTAATTTNGCCAGTTCAGTTTCTCTGTAGGAT
TTTTGCCATAGGTAGGAAAAGGGATTTTAAATATTAATAGGCC

SEQ ID NO: 609

>21063 BLOOD 474850.14 AF118224 g6647301 Human matriptase mRNA, complete cds. 0
GCCTGCCGGACGCCTCCCATGTCTTCCCTGCCGGCAAGGCCATCTGGGTCACGGG
CTGGGGACACACCCAGTATGGAGGCACTGGCGCGCTGATCCTGCAAAAGGGTGA
5 GATCCGCGTCATCAACCAGACCACCTGCGAGAACCTCCTGCCGCAGCAGATCAC
GCCGCGCATGATGGTGATTCCGGGGGACCCCTGTCCAGCGTGGAGGCGGATGGG
CGGATCTTCCAGGCCGGTGTGGTGAGCTGGGAGACGGCTGCGCTCAGAGGAACA
AGCCAGGCGTGTACACAAGGCTCCCTCTGTTTCGGGACTGGATCAAAGAGAACA
CTGGGGTATAGGGGCCGGGGCCACCCAAATGTGTACACTGCGGGGGCCACCCATC
10 GTCCACCCCAGTGTGCACGCCTGCAGGCTGGAGACTGGACCGCTGACTGCACCA
GCGCCCCCAGAACATACTGTGAACTCAATCTCCAGGGCTCCAAATCTGCCTAG
AAAACCTCTCGCTTCCTCAGCCTCCAAAGTGGAGCTGGGAGGTAGAAGGGGAGG
ACACTGGTGGTTCTACTGACCCAACTGGGGGCAAAGGTTTGAAGACACAGCCTC
CCCCGCCAGCCCCAAGCTGGGCCGAGGCGCGTTTGTGTATATCTGCCTCCCCTGT
15 CTGTAAGGAGCAGCGGGAACGGAGCTTCGGAGCCTCCTCAGTGAAGGTGGTGGG
GCTGCCGGATCTGGGCTGTGGGGCCCTTGGGCCACGCTCTTGAGGAAGCCCAGG
CTCGGAGGACCCTGGAACACAGACGGGTCTGAGACTGAAATTGTTTTACCAGCT
CCCAGGGTGGACTTCAGTGTGTGTATTTGTGTAAATGAGTAAAACATTTATTCTT
TTT

SEQ ID NO: 610

>21080 BLOOD 1218745.1 X04366 g29663 Human mRNA for calcium activated neutral
protease large subunit (muCANP; calpain; EC 3.4.22.17). 0
CAGATCTGGATGGAGTTGTGACCTTGAAGTTGTTTAAAGTGGTTGCAGCTGACCAT
25 GTTTGCATGAGGCAGGGACTCGGTCCCCCTTGCCGTGCTCCCCTCCCTCCTCGTCT
GCCAAGCCTCGCCTCCTACCACACCACACCAGGCCACCCCAGCTGCAAGTGCCTT
CCTTGGAGCAGAGAGGCAGCCTCGTCCTCCTGTCCCCTCTCCTCCCAGCCACCAT
CGTTCATCTGCTCCGGGC

SEQ ID NO: 611

>21089 BLOOD 478379.2 U58913 g4204907 Human chemokine (hmrp-2a) mRNA,
complete cds. 0

GGAAGCAGTGAGCCCAGGAGTCCTCGGCCAGCCCTGCCTGCCCACCAGGAGGAT
GAAGGTCTCCGTGGCTGCCCTCTCCTGCCTCATGCTTGTTACTGCCCTTGGATCCC
35 AGGCCCCGGGTCACAAAAGATGCAGAGACAGAGTTTCATGATGTCAAAGCTTCCAT
TGGAATAATCCAGTACTTCTGGACATGCTCTGGAGGAGAAAGATTGGTCCTCAGAT
GACCCTTTCTCATGCTGCAGGATTCCATGCTACTAGTGCTGACTGCTGCATCTCCT
ACACCCACGAAGCATCCCGTGTTCACTCCTGGAGAGTTACTTTGAAACGAACAG
CGAGTGCTCCAAGCCGGGTGTCATCTTCCTCACCAAGAAGGGGCGACGTTTCTGT
40 GCCAACCCCAGTGATAAGCAAGTTCAGGTTTGCATGAGAATGCTGAAGCTGGAC
ACACGGATCAAGACCAGGAAGAATTGAACTTGTCAGGTGAAGGGACACAAGTT
GCCAGCCACCAACTTTCTTGCTCACTACCTTCCTGAATTATTTTTTTAAGAAGC
ATTTATTCTTGTGTTCTGGATTTAGAGCAATTCATCTAATAAACAGTTTCTCACTT
AAAAAAA

SEQ ID NO: 612

>21097 BLOOD 197014.6 AF095742 g4588081 Human serine protease ovasin mRNA,
complete cds. 0

GTGCAGGAGGAGAAGGAGGAGGAGCAGGAGGTGGAGATTCCCAGTTAAAAGGC
TCCAGAATCGTGTACCAGGCAGAGAACTGAAGTACTGGGGCCTCCTCCACTGGG
TCCGAATCAGTAGGTGACCCCGCCCCTGGATTCTGGAAGACCTCACCATGGGACG
CCCCCGACCTCGTGC GGCCAAGACGTGGATGTTCTGCTCTTGCTGGGGGGAGCC
5 TGGGCAGGACACTCCAGGGCACAGGAGGACAAGGTGCTGGGGGGTTCATGAGTGC
CAACCCCATTCGCAGCCTTGGCAGGCGGCCTTGTTCCAGGGCCAGCAACTACTCT
GTGGCGGTGTCCTTGTAGGTGGCAACTGGGTCCTTACAGCTGCCCCACTGTAAAAA
ACCGAAATACACAGTACGCCTGGGAGACCACAGCCTACAGAATAAAGATGGCCC
AGAGCAAGAAATACCTGTGGTTCAGTCCATCCCACACCCCTGCTACAACAGCAG
10 CGATGTGGAGGACCACAACCATGATCTGATGCTTCTTCAACTGCGTGACCAGGCA
TCCCTGGGGTCCAAAGTGAAGCCCATCAGCCTGGCAGATCATTGCACCCAGCCTG
GCCAGAAGTGCACCGTCTCAGGCTGGGGCACTGTCACCAGTCCCCGAGAGAATT
TTCCTGACACTCTCAACTGTGCAGAAGTAAAAATCTTTCCCCAGAAGAAGTGTGA
GGATGCTTACCCGGGGCAGATCACAGATGGCATGGTCTGTGCAGGCAGCAGCAA
15 AGGGGCTGACACGTGCCAGGGCGATTCTGGAGGGCCCCCTGGTGTGTGATGGTGC
ACTCCAGGGCATCACATCCTGGGGCTCAGACCCCTGTGGGAGGTCCGACAAACC
TGGCGTCTATACCAACATCTGCCGCTACCTGGACTGGATCAAGAAGATCATAGGC
AGCAAGGGCTGATTCTAGGATAAGCACTAGATCTCCCTTAATAAACTCACAACTC
TCTGAAAAAAAAAAAA

20

SEQ ID NO: 613

>21102 BLOOD INCYTE_3090747H1
CTTCTTTGTTAGGCTGTGTCTGCTTAANCCCTTGNCACCCAGAGTTTCCCGTC
CCCTTCACTGATTTCTGTTGTCTGCTGACTGTGTGGGTGGAATGTCCCAAGAAA
25 AGTGCATCTGGGAATTGCCAGTCCAGCTGGGTAGTCCCAGGCTCCTGTCTTGGGG
ATGTTTCCCCTGTCAGCAAGTAACCTGGTGAAGTCTATTGAAGGCCAGACTNCCC
CCCTAGGGTCACTGCTTCACTAGCCGCNNCCCACCCAG

SEQ ID NO: 614

30 >21104 BLOOD 987163.5 AF082182 g3435251 Human inwardly rectifying potassium
channel Kir7.1 gene, complete intron, and partial cds. 0

GTTTGCCATTTTCTCTTTCTGATAGAGTACAGCTGAGACCCGGACACTGGTTAG
AGGGCTAGGTCGGGTGTTGGCCACTTGGAAGATAAGATTAGGTTTGCCATCCATG
TGAGCTACTACTGCTATGTCAGTAAAGCGAATTGAAAAAGCTCGATTTTTTTGGCC
35 GGGCAATCTTCGCCACAAAAGCACCTAAATAAGAAATTATTGATTTTTTTTTTAGA
ATGAAGACTTTAAATATCAATACTTTTTCTGAATGACAAGTGTATATCAAATATT
TACACATTTCTTGGTGCCATGCCTTTCAGTGAGTCAGGAATTGAACTCATTGTAA
TTTGGTCAGTCTTATTTGCCTGAAGCATTTTTCAAAGTACATTTCTGTTTAAAAAC
CATGATTTTCAGAATAGATAAGCAAAATGATTTTGTACAGAGAAATGTAAACTT
40 CATCCTCTAGTTTCTTACAAAGTCAAAGAATTGGTCATTTCTATATTCCTGCCTG
TGCTTAAAAAAAAGTAATAGAAAATAAATGCAACTTGGCTACAGCCAGATTACG
TTGAAGTAGAGACTAGGTTTCAGAGTAGAATGATTTGGGATGGGGAGGGGACCAA
TAGAATGAGTGATATT

45 SEQ ID NO: 615

>21140 BLOOD 104171.1 AF037447 g6466790 Human ribosomal S6 protein kinase mRNA,
complete cds. 0

AATTCACCAGGTAAGTTACAAGAAGATCAGGTCTTCCTTCATCAGTACCACTGAC
ATCATCAAAAGCAGCATCTTTAAATGAAATAACTGGCACTGAGTCATCTGAGCCC

CTGCTAATGGTGTCTGAGCTTTAAACTCTACCTTGCTTTCACTAGTATTAAAACT
CCTAGAAGCACTGTCTCCATCTGGAAGAGTAAAGAATGGTTTCAGTGCTTCTAGG
AGTTTTAATACTAGTGAAAGCAAGGTAGAGTTTAAAGCTCAGGACACCATTAGC
AGGGGCTCAGATGACTCAGTGCCAGTTATTTCAATTAAAGATGCTGCTTTTGATG
5 ATGTCAGTGGTACTGATGAAGGAAGACCTGATCTTCTTGTAATTTACCTGGTGA
ATTGGAGTCAACAAGAGAAGCTGCAGCAATGGGACCTACTAAGTTTACACAAAC
TAATATAGGGATAATAGAAAATAAACTCTTGGAAGCCCCTGATGTTTTATGCCTC
AGGCTTAGTACTGAACAATGCCAAGCACATGAGGAGAAAGGCATAGAGGAACTG
AGTGATCCCTCTGGGCCCCAAATCCTATAGTATAACAGAGAAACACTATGCACAG
10 GAGGATCCCAGGATGTTATTTGTAGCAGCTGTTGATCATAGTAGTTCAGGAGATA
TGTCTTTGTTACCCAGCTCAGATCCTAAGTTTCAAGGACTTGGAGTGGTTGAGTC
AGCAGTAACTGCAAACAACACAGAAGAAAGCTTATTCCGTATTTGTAGTCCACTC
TCAGGTGCTAATGAATATATTGCAAGCACAGACACTTTAAAAACAGAAGAAGTA
TTGCTGTTTACAGATCAGACTGATGATTTGGCTAAAGAGGAACCAACTTCTTTAT
15 TCCAGAGAGACTCTGAGACTAAGGGTGAAAGTGGTTTAGTGCTAGAAGGAGACA
AGGAAATACATCAGATTTTTTGAGGACCTTGATAAAAAATTAGCACTAGCCTCCAG
GTTTTACATCCCAGAGGGCTGCATTCAAAGATGGGCAGCTGAAATGGTGGTAGC
CCTTGATGCTTTACATAGAGAGGGAATTGTGTGCCGCGATTTGAACCCAAACAAC
ATCTTATTGAATGATAGAGGACACATTCAGCTAACGTATTTTAGCAGGTGGAGTG
20 AGGTTGAAGATTCCTGTGACAGCGATGCCATAGAGAGAATGTACTGTGCCCCAG
AGGTTGGAGCAATCACTGAAGAACTGAAGCCTGTGATTGGTGGAGTTTGGGTG
CTGTCTCTTTGAACTTCTCACTGGCAAGACTCTGGTTGAATGCCATCCAGCAGG
AATAAATACTCACACTACTTTGAACATGCCAGAATGTGTCTCTGAAGAGGGCTCGC
TCACTCATTCACAGGCTCTTGCAAGTTCAATCCTCTGGAACGACTTGGTGCTGGAG
25 TTGCTGGTGTGAAGATATCAAATCTCATCCATTTTTTACCCCTGTGGATTGGGCA
GAACTGATGAGATGAACGTAATGCAGGGTTATCTTCACACATTCTGATCTTCTCT
GTGACAGGCATCTCCAGCACTGAGGCACCTCTGACTCACAGTTACTTATGGAGCA
CCAAAGCATTTGGATAAAGACCGTTATAGGAAATGGGGGGGAAATGGCTAAAAG
AGAACAATTCGTTTACAATTACAAGATATTAGCTAATTGTGCCAGGGGCTGTTAT
30 ATACATATATACACAACCAAGGTGTGATCTGAATTTAATCCACATTTGGTGTTC
AGATGAGTTGTAAAGCCAACTGAAAGAGTTCTTCAAGAAGTTCTCTGATAGG
AAGCTAGAAGTGTAGAATGAAGTTTACTTGACAGAAGGACCTTTACATGGCAG
CTAACAGTGCTTTTTGCTGACCAGGATTGGTTTATATGATTAAATTAATATTTGCT
TAATAATACACTAAAAGTATATGAACAATGTCATCAATGAACTTAAAAGCGAG
35 AAAAAAGAATATACACATAATTTCTGACGGAAAACCTGTACCCTGATGCTGTATA
ATGTATGTTGAATGTGGTCCCAGATTATTTCTGTAAGAAGACACTCCATGTTGTC
AGCTTTGTACTCTTTGTTGATACTGCTTATTTAGAGAAGGGTTCATATAAACACTC
ACTCTGTGTCTTCAACAGCATCTTTCTTTCCCCATCTTTCTATTTTCTGCACCCTCT
GCTTGTTCCTCATATTCTGTTCTTCCGACTCCTGCTAACACACATGCAACAAAAA
40 AGGGAAGGGAGTGCTTATTTCCCTTTGTGTAAGGACTAAGAAATCATGATATCAA
ATAAACATGGTGAAACATTAGATCTCTTCTTCATTTAATAANNNNNNNNNNNNN
NNNNNNNNGAAGAAATGCGTCTGTTCCCTTCCCTTGTAAGAAATATTATCAGTTTCTA
CCATTGCTTCTCATGCTTGACTTTGTTTTACTTTTTGGCTTGGTATACTAAGAAGC
AAAGGATCTCATCTAAATGGAATTGAATGGCAGTCCTAGTTTGTACTTATGGTG
45 ATGAGATTTTCAGA

SEQ ID NO: 616

>21152 BLOOD 221063.3 U78181 g1871169 Human sodium channel 2 (hBNaC2) mRNA,
complete cds. 4e-12

CATCCATTTCATCGATTTCGCGCATTCTCCAGACCTTTACAGCCTGTGCTGGGTACTG
 GAGACTCCCTGGGTGGGGGCCCTGAGGGCCCGTGCTTCTGCCCCACCCCTGCAA
 CCTGACACGCTATGGGAAAGAGATCTCCATGGTCAGGATCCCCAACAGGGGCTC
 AGCCCGGTACCTGGCGAGGAAGTACAACCGCAACGAGACCTACATACGGGAGAA
 5 CTTCCTGGTCCTAGATGTCTTCTTTGAGGCCCTGACCTCTGAAGCCATGGAGCAG
 CGAGCAGCCTATGGCCTGTCAGCCCTGCTGGGAGACCTCGGGGGACAGATGGGC
 CTGTTTCATTGGGGCCAGCATCCTCACGTTGCTGGAGATCCTCGACTACATCTATG
 AGGTGTCCTGGGATCGACTGAAGCGGGTATGGAGGCGTCCCAAGACCCCCCTG
 GGGACCTCCACTGGGGGCATCTCCA

10

SEQ ID NO: 617

>21181 BLOOD 410188.1 M77235 g184038 Human cardiac tetrodotoxin-insensitive
 voltage-dependent sodium channel alpha subunit (HH1) mRNA, complete cds. 0

15 GCCGCTGAGCCTGCGCCAGTGCCCCGAGCCCCGCGCCGAGCCGAGTCCGCGCC
 AAGCAGCAGCCGCCACCCCGGGGCCCGGCCGGGGGACCAGCAGCTTCCCCACA
 GGCAACGTGAGGAGAGCCTGTGCCCAGAAGCAGGATGAGAAGATGGCAAACCTTC
 CTATTACCTCGGGGCACCAGCAGCTTCCGCAGGTTACACGGGAGTCCCTGGCAG
 CCATCGAGAAGCGCATGGCGGAGAAGCAAGCCCGCGGCTCAACCACCTTGCAGG
 AGAGCCGAGAGGGGCTGCCCGAGGAGGAGGCTCCCCGGCCCCAGCTGGACCTGC
 20 AGGCCTCCAAAAAGCTGCCAGATCTCTATGGCAATCCACCCCAAGAGCTCATCG
 GAGAGCCCCTGGAGGACCTGGACCCCTTCTATAGCACCCAAAAAGACTTTCATCGT
 ACTGAATAAAGGCAAGACCATCTTCEGGTTCAAGTGCCACCAACGCCTTGTATGTC
 CTCAGTCCCTTCCACCCCATCCGGAGAGGGGCTGTGAAGATTCTGGTTCAGTCGC
 TCTCAACATGCTCATCATGTGCACCATCCTCACCAACTGCGTGTTCATGGCCCA
 25 GCACGACCCTCCACCCTGGACCAAGTATGTGAGTACACCTTCACCGCCATTTAC
 ACCTTTGAGTCTCTGGTCAAGATTCTGGCTCGAGGCTTCTGCCTGCACGCGTTAC
 TTTCTTCGGGACCCATGGAAGTGGCTGGACTTTAGTGTGATTATCATGGCATA
 ACAACTGAATTTGTGGACCTGGGCAATGTCTCAGCCTTACGCACCTTCCGAGTCC
 TCCGGGCCCTGAAAACCTATATCAGTCATTTACAGGGCTGAAGACCATCGTGGGGGC
 30 CCTGATCCAGTCTGTGAAGAAGCTGGCTGATGTGATGGTCCTCACAGTCTTCTGC
 CTCAGCGTCTTTGCCCTCATCGGCCTGCAGCTCTTCATGGGCAACCTAAGGCACA
 AGTGTGTGCGCAACTTCACAGCGCTCAACGGCACCAACGGCTCCGTGGAGGCCG
 ACGGCTTGGTCTGGGAATCCCTGGACCTTTACCTCAGTGATCCAGAAAATTACCT
 GCTCAAGAACGGCACCTCTGATGTGTTACTGTGTGGGAACAGCTCTGACGCTGGG
 35 ACATGTCCGGAGGGGCTACCGGTGCCTAAAGGCAGGCGAGAACCCCGACCAACGGC
 TACACCAGCTTCGATTCCCTTTGCCTGGGCCTTTCTTGCACTCTTCCGCCTGATGAC
 GCAGGACTGCTGGGAGCGCCTCTATCAGCAGACCCTCAGGTCCGCAGGGAAGAT
 CTACATGATCTTCTTCATGCTTGTCTCTTCTGGGGTCTTCTACCTGGTGAACC
 TGATCCTGGCCGTGGTTCGCAATGGCCTATGAGGAGCAAAACCAAGCCACCATCG
 40 CTGAGACCGAGGAGAAGGAAAAGCGCTTCCAGGAGGCCATGGAAATGCTCAAG
 AAAGAACACGAGGCCCTCACCATCAGGGGTGTGGATACCGTGTCCCGTAGCTCC
 TTGGAGATGTCCCCTTTGGCCCCAGTAAACAGCCATGAGAGAAGAAGCAAGAGG
 AGAAAACGGATGTCTTCAGGAAGTGTGGGAGGACAGGCTCCCCAAG
 TCTGACTCAGAAGATGGTCCCAGAGCAATGAATCATCTCAGCCTCACCCGTGGCC
 45 TCAGCAGGACTTCTATGAAGCCACGTTCCAGCCGCGGGAGCATTTTCACCTTTTCG
 CAGGCGAGACCTGGGTTCTGAAGCAGATTTTGCAGATGATGAAAACAGCACAGC
 GGGGGAGAGCGAGAGCCACCACACATCACTGCTGGTGCCCTGGCCCCTGCGCCG
 GACCAGTGCCAGGGACAGCCAGTCCCGGAACCTCGGCTCCTGGCCACGCCCT
 CCATGGCAAAAAGAACAGCACTGTGGACTGCAATGGGGTGGTCTCATTACTGGG

GGCAGGCGACCCAGAGGCCACATCCCCAGGAAGCCACCTCCTCCGCCCTGTGAT
 GCTAGAGCACCCGCCAGACACGACCACGCCATCGGAGGAGCCAGGCGGCCCCCA
 GATGCTGACCTCCCAGGCTCCGTGTGTAGATGGCTTCGAGGAGCCAGGAGCACG
 GCAGCGGGCCCTCAGCGCAGTCAGCGTCCTCACCAGCGCACTGGAAGAGTTAGA
 5 GGAGTCTCGCCACAAGTGTCCACCATGCTGGAACCGTCTCGCCCAGCGCTACCTG
 ATCTGGGAGTGCTGCCCGCTGTGGATGTCCATCAAGCAGGGAGTGAAGTTGGTG
 GTCATGGACCCGTTTACTGACCTCACCATCACTATGTGCATCGTACTCAACACAC
 TCTTCATGGCGCTGGAGCACTACAACATGACAAGTGAATTCGAGGAGATGCTGC
 AGGTCGGAAACCTGGTCTTTCACAGGGATTTTTCACAGCAGAGATGACCTTCAAGAT
 10 CATTGCCCTCGACCCCTACTACTTCCAACAGGGCTGGAACATCTTCGACAGC
 ATCATCGTCATCCTTAGCCTCATGGAGCTGGGCCTGTCCCGCATGAGCAACTTGT
 CGGTGCTGCGCTCCTTCCGCCTGCTGCGGGTCTTCAAGCTGGCCAAATCATGGCC
 CACCCTGAACACACTCATCAAGATCATCGGGAACCTCAGTGGGGGCACTGGGGAA
 CCTGACACTGGTGCTAGCCATCATCGTGTTTCATCTTTGCTGTGGTGGGCATGCAG
 15 CTCTTTGGCAAGAACTACTCGGAGCTGAGGGACAGCGACTCAGGCCTGCTGCCTC
 GCTGGCACATGATGGACTTCTTTCATGCCTTCCTAATCATCTTCCGCATCCTCTGT
 GGAGAGTGGATCGAGACCATGTGGGACTGCATGGAGGTGTCGGGGCAGTCATTA
 TGCCTGCTGGTCTTCTTGCTTGTTATGGTCATTGGCAACCTTGTGGTCTGAATCT
 CTTCTGCTGGCCTTGCTGCTCAGCTCCTTCAGTGCAGACAACCTCACAGCCCCTGAT
 20 GAGGACAGAGAGATGAACAACCTCCAGCTGGCCCTGGCCCGCATCCAGAGGGGC
 CTGCGCTTTGTCAAGCGGACCACTGGGATTTCTGCTGTGGTCTCCTGCGGCACC
 GGCCTCAGAAGCCCGCAGCCCTTGCCGCCAGGGCCAGCTGCCCAGCTGCATGCG
 CACCCCTACTCCTCCGCGACCCCGAGAGACGGAGAAGGTGCCTCCACCCGCA
 25 GGAACACAGTTTGAGGAAGGCGAGCAACCAAGGCCAGGGCACCCCGGGGATC
 CAGAGCCCGTGTGTGTGCCATCGCTGTGGCCGAGTCAGACACAGATGACCAAG
 AAGAGGATGAGGAGAACAGCCTGGGCACGGAGGAGGAGTCCAGCAAGCAGCAG
 GAATCCCAGCCTGTGTCCGGCTGGCCCAGAGGCCCTCCGGATTCCAGGACCTGGA
 GCCAGGTGTCAGCGACTGCCTCCTCTGAGGCCGAGGCCAGTGCATCTCAGGCCG
 ACTGGCGGCAGCAGTGGAAGCGGAACCCAGGGCCCAGGGTGCGGTGAGACCC
 30 CAGAGGACAGTTGCTCCGAGGGCAGCACAGCAGACATGACCAACACCGCTGAGC
 TCCTGGAGCAGATCCCTGACCTCGGCCAGGATGTCAAGGACCCAGAGGACTGCT
 TCACTGAAGGCTGTGTCCGGCGCTGTCCCTGCTGTGCGGTGGACACCACACAGGC
 CCCAGGGAAGGTCTGGTGGCGGTTGCGCAAGACCTGCTACCACATCGTGGAGCA
 CAGCTGGTTCGAGACATTCATCATCTTCATGATCCTACTCAGCAGTGGAGCGCTG
 35 GCCTTCGAGGACATCTACCTAGAGGAGCGGAAGACCATCAAGGTTCTGCTTGAG
 TATGCCGACAAGATGTTACATATGTCTTCGTGCTGGAGATGCTGCTCAAGTGGG
 TGGCCTACGGCTTCAAGAAGTACTTCACCAATGCCTGGTGCTGGCTCGACTTCCT
 CATCGTAGACGTCTCTCTGGTCAGCCTGGTGGCCAACACCCTGGGCTTTGCCGAG
 ATGGGCCCCATCAAGTCACTGCGGACGCTGCGTGCACTCCGTCTCTGAGAGCTC
 40 TGTCACGATTTGAGGGCATGAGGGTGGTGGTCAATGCCCTGGTGGGCGCCATCCC
 GTCCATCATGAACGTCTCTCGTCTGCCTCATCTTCTGGCTCATCTTCAGCATCA
 TGGGCGTGAACCTCTTTGCGGGGAAGTTTGGGAGGTGCATCAACCAGACAGAGG
 GAGACTTGCCCTTTGAACTACACCATCGTGAACAACAAGAGCCAGTGTGAGTCCTT
 GAACTTGACCGGAGAATTGTACTGGACCAAGGTGAAAGTCAACTTTGACAACGT
 45 GGGGGCCGGGTACCTGGCCCTTCTGCAGGTGGCAACATTTAAAGGCTGGATGGA
 CATTATGTATGCAGCTGTGGACTCCAGGGGGTATGAAGAGCAGCCTCAGTGGGA
 ATACAACCTCTACATGTACATCTATTTGTCAATTTTCATCATCTTTGGGTCTTTCTT
 CACCCTGAACCTCTTTATTGGTGTCACTTGAACAACCTTCAACCAACAGAAGAAA
 AAGTTAGGGGGCCAGGACATCTTCATGACAGAGGAGCAGAAGAAGTACTACAAT

GCCATGAAGAAGCTGGGCTCCAAGAAGCCCCAGAAGCCCATCCCACGGCCCCTG
 AACAAGTACCAGGGCTTCATATTCGACATTGTGACCAAGCAGGCCTTTGACGTCA
 CCATCATGTTTCTGATCTGCTTGAATATGGTGACCATGATGGTGGAGACAGATGA
 CCAAAGTCCTGAGAAAATCAACATCTTGCCCAAGATCAACCTGCTCTTTGTGGCC
 5 ATCTTCACAGGCGAGTGTATTGTCAAGCTGGCTGCCCTGCGCCACTACTACTTCA
 CCAACAGCTGGAATATCTTCGACTTCGTGGTTGTCATCCTCTCCATCGTGGGCACT
 GTGCTCTCGGACATCATCCAGAAGTACTTCTTCTCCCCGACGCTCTTCCGAGTCAT
 CCGCCTGGCCCGAATAGGCCGCATCCTCAGACTGATCCGAGGGGGCCAAGGGGAT
 CCGCACGCTGCTCTTTGCCCTCATGATGTCCCTGCCTGCCCTCTTCAACATCGGGC
 10 TGCTGCTCTTCCTCGTCATGTTTATCTACTCCATCTTTGGCATGGCCAACTTCGCT
 TATGTCAAGTGGGAGGCTGGCATCGACGACATGTTCAACTTCCAGACCTTCGCCA
 ACAGCATGCTGTGCCTCTTCCAGATCACCACGTGCGCCGGCTGGGATGGCCTCCT
 CAGCCCCATCCTCAACACTGGGCCGCCCTACTGCGACCCCACTCTGCCCAACAGC
 AATGGCTCTCGGGGGGACTGCGGGAGCCAGCCGTGGGCATCCTCTTCTTACCA
 15 CCTACATCATCATCTCCTTCCTCATCGTGGTCAACATGTACATTGCCATCATCCTG
 GAGAACTTCAGCGTGGCCACGGAGGAGAGCACCAGCCCTGAGTGAGGACGAC
 TTCGATATGTTCTATGAGATCTGGGAGAAATTTGACCCAGAGGCCACTCAGTTTA
 TTGAGTATTTCGGTCCTGTCTGACTTTGCCGACGCCCTGTCTGAGCCACTCCGTATC
 GCCAAGCCCAACCAGATAAGCCTCATCAACATGGACCTGCCATGGTGAGTGGG
 20 GACCGCATCCATTGCATGGACATTCTCTTTGCCTTCACCAAAAGGGTCCTGGGGG
 AGTCTGGGGAGATGGACGCCCTGAAGATCCAGATGGAGGAGAAGTTCATGGCAG
 CCAACCCATCCAAGATCTCCTACGAGCCCATCACCAACCACTCCGGCCGAAGCA
 CGAAGAGGTGTCGGCCATGGTTATCCAGAGAGCCTTCCGCAGGCACGTGCTGCA
 ACGCTCTTTGAAGCATGCTCCTTCTTCCGTGAGCAGGCGGGCAGCGGCCTC
 25 TCCGAAGAGGATGCCCTGAGCGAGAGGGCCTCATCGCCTACGTGATGAGTGAG
 AACTTCTCCCGACCCCTTGCCCCACCCTCCAGCTCCTCCATCTCCTCCACTTCCTT
 CCCACCCTCCTATGACAGTGTCACTAGAGCCACCAGCGATAACCTCCAGGTGCGG
 GGGTCTGACTACAGCCACAGTGAAGATCTCGCCGACTTCCCCCTTCTCCGGACA
 GGGACCGTGAGTCCATCGTGTGAGCCTCGGCCTGGCTGGCCAGGACACACTGAA
 30 AAGCAGCCTTTTTTACCATGGCAAACCTAAATGCAGTCAGTCACAAACCAGCCTG
 GGGCCTTCTGCTTTGGGAGTAAGAAATGGGCCTCGGCCCGCGGATCAACCA
 GGCAGAGTTCTGTGGCGCCGCGTGGACAGCCGGAGCAGTTGGCCTGTGCTTGA
 GGCCTCAGATAGACCTGTGACCTGGTCTGGTCAGGCAATGCCCTGCGGCTCTGG
 AAAGCAACTTCATCCCAGCTGCTGAGGCGAAATATAAACTGAGACTGTATATG
 35 TTGTGAATGGGCTTTCATAAATTTATTATATTTGATATTTTTTTACTTGAGCAAAG
 AACTAAGGATTTTTTCCATGGACATGGGCAGCAATTCACGCTGTCTCTTCTTAACC
 CTGAACAAGAGTGTCTATGGAGCAGCCGGAAGTCTGTTCTCAAAGCAGAAGTGG
 AATCCAGTGTGGCTCCACAGGTCTTCACTGCCCAGGGGTGGAATGGGGTCCCCC
 TCCCACTTGATGAGATGCTGGGAGGGCTGAACCCCCACTCACACAAGCANACAC
 40 ACACAGTCCTCACACACGGAGGCCAGACACAGGCCGTGGGACCCAGGCTCCAG
 CCTAAGGGAGACAGGCCTTTCCCTGCCGGCCCCCAAGGATGGGGTTCTTGTTCA
 CGGGGCTCACTCTGGCCCCCTATTGTCTCCAAGGTCCCATTTCCTCCCTGTGTTTT
 CACGCAGGTCATATTGTGAGTCTTACAAAAATAAAAGGCTTCCAGAGGAGAGTG
 GCCTGGGGTCCCAGGGCTGGGCCNTAGGCACTGATAGTTGCCTTTTCTTCCCCTC
 45 CTGTAAGAGTATTAACAAAACCAAAGGACACAAGGGTGCAAGCCCCATTACGG
 CCTGGCATGCAGCTTGTCTTGTCTCCTGGAACCTGGCAGGCCCTGCCAGCCAGCC
 AATGGAAGAGAGGGGCTGAGCCATGGGGGTTTGGGGCTAAGAAGTTCACCAGCC
 CTGAGCCATGGNCCCTCAGCCTGCCTGAAGAGAGGAAACTGGCGATCTCCAGG
 GCTCTCTGGACCATAACNCGGAGGAGTTTTCNNGTGTGGTCTCCAGCTCCTCTCCA

GACACAGAGACATGGGAGTGGGGAGCGGACGTTGGCCCTGGCCCTGTGCAGGGA
 AAGGGATGGTCAGGCCCAAGTTCTCGTGCCCTTAGAGGGGAATGAACCATGGCA
 CCTTTGAGAGAGGGGGCACTGTGGTCAGGCCCAAGCTCTCTGGCANNAGTCCCGG
 GATCCTGATGGCACCCACACAGAGGACCTCTTTGGGGCAAGATCCAGGTGGNTC
 5 CCATAGGTCTTGTGAAAAGGCTTTTTTCAGGGAAAAATATTTTACTAGTCCAATCA
 CCCCCAGGACCTCTTCAGCTGCGACAATCCTATTTAGCATATGCAAATCTTTTAA
 CATAGAGAACTGTCACCCTGAGGTAACAGGGTCAACTGGCGAAGCTGAAGCAGG
 CAGGGGCTTGGCTGCCCCATTCCAGCTCTCCACGGAGCCCCTCCAACCGGGCGC
 ATGCTCCCAGGCCACCTCAGTCTCACCTGCCGGCTCTGGGCTGGCTGCTCCTAAC
 10 CTACCTCGCCGAGCTGTCTGGAGGGCTGGACATTTGTGGCAGTGTCTGAAGGGGGC
 ATTGCCGGCGAGTAAAGTATTATGTTTCTTCTTGTACACCCAGTTCCCTTGGTGGC
 AACCCAGACCCAACCCATGCCCTGACAGATCTAGTTCTCTTCTCCTGTGTTCCC
 TTTGAGTCCAGTGTGGGACACGGTTTAACTGTCCAGCGACATTTCTCCAAGTGG
 AAATCCTATTTTTGTAGATCTCCATGCTTTGCTCTCAAGGCTTGGAGAGGTATGTG
 15 CCCCTCCTGGGTGCTCACCGCCTGCTACACAGGCAGGAATGCGGTTGGGAGGCA
 GGTCCGGGCTGCCAGCCCAGCTNGCCGGAAGGAGACTGTGGTTTTTGTGTGTGTGG
 ACAGCCCGGGAGCTTTGAGACAGGTGCCTGGGGCTGGCTGCAGACGGTGTGGTT
 GGGGGTGGGAGGTGAGCTAGACCCAACCCTTAGCTTTTAGCCTGGCTGTCACCTT
 TTTAATTTCCAGAACTGCACAATGACCAGCAGGAGGGGAGAAGAGAGTAGGAAA
 20 AAGGAGGGAAGGACAGACATCAAGTGCCAGATGTTGTCTGAACTAATCGAGCAC
 TTCTCACCAAACCTTCATGTATAAAATAAAATACATATTTTTTAAACAAACCAATAA
 ATGGCTTACATGACCTGG

SEQ ID NO: 618

25 >21187 BLOOD 319829.1 AJ009936 g5852062 Human mRNA for nuclear hormone
 receptor PRR1.0

TGAAATATAGGTGAGAGACAAGATTGTCTCATATCCGGGGAAATCATAACCTAT
 GACTAGGACGGGAAGAGGAAGCACTGCCTTTACTTCAGTGGGAATCTCGGCCTC
 AGCCTGCAAGCCAAGTGTTCACAGTGAGAAAAGCAAGAGAATAAGCTAATACTC
 30 CTGTCTGAACAAGGCAGCGGCTCCTTGGTAAAGCTACTCCTTGATCGATCCTTT
 GCACCGGATTGTTCAAAGTGGACCCCAAGGGGAGAAGTCGGAGCAAAGAAGTAC
 CACCAAGCAGTCCAAGAGGGCCAGAAGCAAACCTGGAGGTGAGACCCAAAGAA
 AGCTGGAACCATGCTGACTTTGTACACTGTGAGGACACAGAGTCTGTTCTTGAA
 AGCCAGTGTCAACGCAGATGAGGAAGTCGGAGGTCCCAAATCTGCCGTGTAT
 35 GTGGGGACAAGGCCACTGGCTATCACTTCAATGTCATGACATGTGAAGGATGCA
 AGGGCTTTTTTCAGGAGGGCCATGAAACGCAACGCCCGGCTGAGGTGCCCTTCC
 GGAAGGGCGCCTGCGAGATCACCCGGAAGACCCGGCGACAGTGCCAGGCCTGCC
 GCCTGCGCAAGTGCCTGGAGAGCGGCATGAAGAAGGAGATGATCATGTCCGACG
 AGGCCGTGGAGGAGAGGCGGGCCTTGATCAAGCGGAAGAAAAGTGAACGGACA
 40 GGGACTCAGCCACTGGGAGTGCAGGGGCTGACAGAGGAGCAGCGGATGATGATC
 AGGGAGCTGATGGACGCTCAGATGAAAACCTTTGACACTACCTTCTCCCATTTCA
 AGAATTTCCGGCTGCCAGGGGTGCTTAGCAGTGGCTGCGAGTTGCCAGAGTCTCT
 GCAGGCCCCATCGAGGGAAGAAGCTGCCAAGTGGAGCCAGGTCCGGAAAGATCT
 GTGCTCTTTGAAGGTCTCTCTGCAGCTGCGGGGGGAGGATGGCAGTGTCTGGAAC
 45 TACAAACCCCCAGCCGACAGTGGCGGGAAAGAGATCTTCTCCCTGCTGCCCCAC
 ATGGCTGACATGTCAACCTACATGTTCAAAGGCATCATCAGCTTTGCCAAAGTCA
 TCTCCTACTTCAGGGACTTGCCCATCGAGGACCAGATCTCCCTGCTGAAGGGGGC
 CGCTTTCGAGCTGTGTCAACTGAGATTCAACACAGTGTTC AACCGGAGACTGGA
 ACCTGGGAGTGTGGCCGGCTGTCTACTGCTTGAAGACACTGCAGGTGGCTTCC

AGCAACTTCTACTGGAGCCCATGCTGAAATTCCACTACATGCTGAAGAAGCTGCA
 GCTGCATGAGGAGGAGTATGTGCTGATGCAGGCCATCTCCCTCTTCTCCCCAGAC
 CGCCCAGGTGTGCTGCAGCACCGCGTGGTGGACCAGCTGCAGGAGCAATTCGCC
 ATTACTCTGAAGTCCTACATTGAATGCAATCGGCCCCAGCCTGCTCATAGGTTCT
 5 TGTTCCTGAAGATCATGGCTATGCTCACCGAGCTCCGCAGCATCAATGCTCAGCA
 CACCCAGCGGCTGCTGCGCATCCAGGACATACACCCCTTTGCTACGCCCCCTCATG
 CAGGAGTTGTTTCGGCATCACAGGTAGCTGAGCGGCTGCCCTTGGGTGACACCTCC
 GAGAGGCAGCCAGACCCAGAGCCCTCTGAGCCGCCACTCCCGGGCCAAGACAGA
 TGGACACTGCCAAGAGCCGACAATGCCCTGCTGGCCTGTCTCCCTAGGGAATTCC
 10 TGCTATGACAGCTGGCTAGCATTCCCTCAGGAAGGACATGGGTGCCCCCACC
 AGTTCACTGTGTAGGGAGTGAAGCCACAGACTCTTACGTGGAGAGTGCCTGAC
 CTGTAGGTCAGGACCATCAGAGAGGCAAGGTTGCCCTTTCTTTTAAAAGGCCCT
 GTGGTCTGGGGAGAAATCCCTCAGATCCCACTAAAGTGTCAAGGTGTGGAAGGG
 ACCAAGCGACCAAGGATGGGGCATCTGGGGTCTATGCCACATACCCACGTTTGT
 15 TCGCTTCCTGAGTCTTTTCATTGCTACCTCTAATAGTCCTGTCTCCCACTTCCCACT
 CGTTCCTCCTCTTCCGAGCTGCTTTGTGGGCTCCAGGCCTGTACTCATCGGCAG
 GTGCATGAGTATCTGTGGGAGTCCTCTAGAGAGATGAGAAGCCAGGAGGCCTGC
 ACCAAATGTCAGAAGCTTGGCATGACCTCATTCCGGCCACATCATTCTGTGTCTC
 TGCATCCATTTGAACACATTATTAAGCACCGATAATAGGTAGCCTGCTGTGGGGT
 20 ATACAGCATTGACTCAGATATAGATCCTGAGCTCACAGAGTTTATAGTTAAAAAA
 ACAAACAGAAACACAAACAATTTGGATCAAAAGGAGAAATGATAAGTGACAAA
 AGCAGCACAAAGGAATTTCCCTGTGTGGATGCTGAGCTGTGATGGCGGGCACTGG
 GTACCCAAGTGAAGGTTCCCGAGGACATGAGTCTGTAGGAGCAAGGGCACAAG
 TGCAGCTGTGAGTGCCTGTGTGTGATTGTTGGTGTAGGTAGGTCTGTTTGGCACTTG
 25 ATGGGGCCTGGGTTTGTTCCTGGGGCTGGAATGCTGGGTATGCTCTGTGACAAGG
 CTACGCTGACAATCAGTTAAACACACCGGAGAAGAACCATTACATGCACCTTAT
 ATTTCTGTGTACACATCTATTCTCAAAGCTAAAGGGTATGAAAGTGCCTGCCTTG
 TTTATAGCCACTTGTGAGTAAAAATTTTTTGCATTTTCACAAATTATACTTTATA
 TAAGGCATTCCACACCTACGAAGTATTTTGGGAAATGTAGCCCTGGGTTTAAATG
 30 TCAAATCAAGGCAAAAGGAATTAATAATGTACTTTTGGCTAGAGGGGTAAACT
 TTTTTGGCCTTTTTCTGGGGAAAATAATGTGGGGGTGTGGAAATAGAAACATACG
 CAAGCATAACATTTTTTACTACTTATTTTATTATTATCCTGTATAAAT

SEQ ID NO: 619

35 >21189 BLOOD 232328.1 AF169677 g6808606 Human leucine-rich repeat transmembrane
 protein FLRT3 (FLRT3) mRNA, complete cds. 0
 GTCCAATAATAACCTAAGTAATTTACCTCAGGGTATCTTTGATGATTTGGACAAT
 ATAACACAACCTGATTCTTCGCAACAATCCCTGGTATTGCGGGTGCAAGATGAAAT
 GGGTACGTGACTGGTTACAATCACTACCTGTGAAGGTCAACGTGCGTGGGCTCAT
 40 GTGCCAAGCCCCAGAAAAGGTTTCGTGGGATGGCTATTAAGGATCTCAATGCAGA
 ACTGTTTGATTGTAAGGACAGTGGGATTGTAAGCACCATTACAGATAACCACTGCA
 ATACCCAACACAGTGTATCCTGCCCAAGGACAGTGGCCAGCTCCAGTGACCAAA
 CAGCCAGATATTAAGAACCCCAAGCTCACTAAGGATCAACAAACCACAGGGAGT
 CCCTCAAGAAAAACAATTACAATTACTGTGAAGTCTGTACCTCTGATACCATTC
 45 ATATCTCTTGGAACCTTGCTCTACCTATGACTGCTTTGAGACTCAGCTGGCTTAAA
 CTGGGCCATAGCCCGGCATTTGGATCTATAACAGAAACAATTGTAACAGGGGAA
 CGCAGTGTGTACTTGGTCACAGCCCTGGAGCCTGATTCACCCTATAAAGTATGCA
 TGTTCCCATGGAAACCAGCAACCTCTACCTATTTGATGAAACTCCTGTTTGTATT
 GAGACTGAAACTGCACCCCTTCGAATGTACAACCCTACAACCACCCTCAATCGAG

AGCAAGAGAAAGAACCTTACAAAAACCCCAATTTACCTTTGGCTGCCATCATTGG
 TGGGGCTGTGGCCCTGGTTACCATTTGCCCTTCTTGCTTTAGTGTGTTGGTATGTTC
 ATAGGAATGGATCGCTCTTCTCAAGGAAGTGTGCATATAGCAAAGGGAGGAGAA
 GAAAGGATGACTATGCAGAAGCTGGCACTAAGAAGGACAACCTCTATCCTGGAAA
 5 TCAGGGAACTTCTTTTCAGATGTTACCAATAAGCAATGAACCCATCTCGAAGGA
 GGAGTTTGTAAACACACACCATATTTCTCCTAATGGAATGAATCTGTACAAAAAC
 AATCACAGTGAAAGCAGTAGTAACCGAAGCTACAGAGACAGTGGTATTCCAGAC
 TCAGATCACTCACACTCATGATGCTGAAGGACTCACAGCAGACTTGTGTTTTGGG
 TTTTTTAAACCTAAGGGAGGTGATGGTAGGAACCCCTGTTCTACTGCAAAACACTG
 10 GAAAAAGAGACTGAAAAAAGCAATGTACTGTACATTTGCCATATAATTTATATT
 TAAGAACTTTTTATTAAAAGTTTCAAATTTTCAAGGTTACTGCTGCGATTGATGTAGT
 GGAGATGCCTGAACACAATTCTATATTTTAGTATTTTTTAGTAATTTGTACTGTAT
 TTTCTTGCAAATATTGGAGTTATAAACCATTTACTTTGTGTTCTACTGAGTAAGA
 TGACTTGTGACTGTGAAAGTGAATTTTCTTGCTGTGTCGAACAATCAGGACTGC
 15 ATTCATATGAGATCCTTGTAGTATAAGCACAGGCCATTTTTCACTTTGGTATTAAT
 AAAATGTAAAAAAGCAATGAGTGAATGGCTGAATGAGATAAAATTTAATTT
 TAAAAAATGGTTATGAAATAATGTTCCAATTATTAATTTGTATTATCCCAGTGG
 TATTCAATAAATCAAAATGTGTGAAGTAATGGGCAATATCAAACCTTCTGCATAT
 CTCCATTTTTGCTCTAGGCAAATTAATTATCCTTAAAAAAGTTAAGCATATCTTCT
 20 GAACTGAATACATCAGCTGGCATAAAAGGAGCATGAAGTCTGTTAAAGCCATTG
 TCAGCAAAGCTTTGAAAATAAAGGACTTCACAAAAACGGTAATGTAAATGTGCT
 TCCAAGTTGGGGGGAAAATGEGTACTTAGGAAAACATGGAACTTAGACTTGTA
 TAGTGTAAATGAACACAAATACCAAACCTGCATTTTGGTTTTGCCTATACCATCT
 GATTTTTGAAAAGTGAATTATAAACACAAAATTGTTAGTGTATGATGTTTTTAT
 25 CATAAAGGATGTCAGAGAACTTTATGCATATTAATAAATGTAATGTAATTATAAG
 CGATTCCCCTCAACAATCCAGAGAAAGTAGTTCTTTAAATAAGAGATAATTTAAA
 GAAAAATAAATACTAGACATCAAATTTAGATCTGGTTTATGTCAAAGGTTTTAAC
 ACTGTACATAAATGTTCAATTTACTTTTACAAAGATCAAGAATACTGCCCATTA
 TGTCACAATTTTCCAGATATTATATAATGAACTCGTAATGTAACATTTCTTCTAG
 30 CTTCTACTGAATTGTGAGCTGTTACTTGTGTTGAAAAACCATATCACTTTTCTGTTG
 CCATGATTTTTTTTTTCAACAAAAAACCAAAGTGCATTGTACGCCCTTTGGCCAGT
 CTTGTATGTGCCTTGATCCAACGCTACATGTATTCAGCTTTTAAAACCTCCACAAAT
 TTTTCATACTCCTTAAATATGAAAAATTATGGTCTTATTGCTGAATAAACTTTTA
 AAAAGTACAGAATAATTGTGCTTGCTTTTTCAGGATTGTGTTACTATCACTAAGT
 35 AGCAAATTGCCCAGCACATTAGTCCTAAACGTCCCATGTATTTTTCTAGGCATAA
 AAATAAAAGTTGGCTAAAAATTTTAAAAAATC

SEQ ID NO: 620

>21213 BLOOD 474592.17 AF061749 g3372676 Human tumorous imaginal discs protein

40 Tid56 homolog (TID1) mRNA, complete cds. 0
 GATGGCTGCGCGGTGCTCCACACGCTGGTTGCTGGTGGTTGTGGGGACCCCGCGG
 CTGCCGGCTATATCGGGTAGAGGGGCCCCGGCCGCCAGGGAGGGCGTGGTGGGG
 GCATGGCTGAGCCGCAAGCTGAGCGTCCCCGCCTTTGCGTCTTCCCTGACCTCTT
 GCGGCCCCCGAGCGCTGCTGACATTGAGACCTGGTGTGAGCCTCACAGGAACAA
 45 AACATTACCCTTTTCAATTTGTACTGCCTCCTTCCACACGAGTGCCCCCTTTGGCCAAA
 GAAGATTATTATCAGATATTAGGAGTGCCTCGAAATGCCAGCCAGAAAGAGATC
 AAGAAAGCCTATTATCAGCTTGCCAAGAAGTATCACCTGACACAAATAAGGAT
 GATCCCAAAGCCAAGGAGAAGTTCTCCAGCTGGCAGAAGCCTATGAGGTTTTG
 AGTGATGAGGTGAAGAGGAAGCAGTACGATGCCTACGGCTCTGCAGGCTTCGAT

CCTGGGGCCAGCGGCTCCCAGCATAGCTACTGGAAGGGAGGCCCCACTGTGGAC
 CCCGAGGAGCTGTTTCAGGAAGATCTTTGGCGAGTTCTCATCCTCTTCATTTGGAG
 ATTTCCAGACCGTGTTTGATCAGCCTCAGGAATACTTCATGGAGTTGACATTCAA
 TCAAGCTGCAAAGGGGGTCAACAAGGAGTTCACCGTGAACATCATGGACACGTG
 5 TGAGCGCTGCAACGGCAAGGGGAACGAGCCCGGCACCAAGGTGCAGCATTGCCA
 CTACTGTGGCGGCTCCGGCATGGAAACCATCAACACAGGCCCCTTTTGTGATGCGT
 TCCACGTGTAGGAGATGTGGTGGCCGCGGCTCCATCATCATATCGCCCTGTGTGG
 TCTGCAGGGGAGCAGGACAAGCCAAGCAGAAAAAGCGAGTGATGATCCCTGTGC
 CTGCAGGAGTCGAGGATGGCCAGACCGTGAGGATGCCTGTGGGAAAAAGGGAA
 10 ATTTTCATTACGTTTCAGGGTGCAGAAAAGCCCTGTGTTCCGGAGGGACGGCGCAG
 ACATCCACTCCGACCTCTTTATTTCTATAGCTCAGGCTCTTCTTGGGGGAACAGCC
 AGAGCCCAGGGCCTGTACGAGACGATCAACGTGACGATCCCCCTGGGACTCAG
 ACAGACCAGAAGATTCGGATGGGTGGGAAAGGCATCCCCCGGATTAACAGCTAC
 GGCTACGGAGACCACTACATCCACATCAAGATACGAGTTCCAAAGAGGGCTAACG
 15 AGCCGGCAGCAGAGCCTGATCCTGAGCTACGCCGAGGACGAGACAGATGTGGAG
 GGGACGGTGAACGGCGTCACCCTCACCAGCTCTGGAAAAAGATCCACTGGAAAC
 TAGGCCGGGAAGCAGCAGCCCCTCCAAGGGCCAGGGCACCTGGGAGACGGGAG
 GATTCCAGAACAGCAGCACTGAGCTCCACCCGCAGAGCCTCTGGACGGCCTTG
 GCAACAGCAAAATCATGGGACAACACCTCTCTCCACGGAAAGGTCACAGTGGAC
 20 AGCCCGGGCAGTAGGATGCAGCCCCAGAGGCTGGTGGCAGTTTCCTGTCCATTG
 GTAGGTGACGGCCCCTGGCTCAGGCAGAGGGAGATGGTTAGACTCTTGCAGGGC
 TAAAACTCTAATTTGGAATTGAATATTGTGGATATCTTAGTTAAAGGCCATGCTT
 ACAGCTTAGAAATGAAGCCTTAAGCTGCATCAAGTTACGAAGTGATTAATTTCT
 TCTCAGCAAACCTCCGGGAGGTTCCAGAAATGAGTTCTTCTGACAGGTTGTCTTC
 25 ACTGGGAGCGTGGGGCCCCCAGGCCCCACCAGCACCGTCCCTCCCCTAATGAGGG
 GCCCTGCCGAGGCATCAGCTGCTCTGCTCAGTTAGTTTTTATTCCCGGGGTACCA
 AGCAGCTGCACAGTCGGTGCCTGGGAGGCACGTAGAGGCCCAGAGAGTCCCTGG
 GGGTTCTGCTCTGACCGTGTGGGTGGTGATCCTTGTCAGGATGTACAGTCCCTGC
 TCCCACCCCATCCAGGATGGCCGCCTGTCCCTGACTATTGAGTCCTGTTGTTGTAA
 30 GCCAGGCATGGAGGGCTCCTGCCCTTCTGCTGAGCCACAGCCCATTGCAGCACTG
 TGCTGGCCAGACTTCAGCTGCCTTGGGAACTGAAGCCCTGCCACTGTTGCTAGTC
 AGGGGCTTGTTCTCCCACTTACACTGTTGACATCTATTTTCTGAAGTGTGTTTAA
 ATTATTCAGTGCTAATCATTGTTTTTCTTTGTAAATGTTGATTGAGAAAAGGAA
 AGCACAGGCTAAGCAGTTGAAGGTTCCCCACCATTCAGTGAGAGCAGAACCCCC
 35 ATTCCCAGCCTCTGCTGGTAGCATGTCGCAGTTTCCATGTGTTTCAGGATCTTCG
 GGCTGTCGTTAGACAGGTTAATGAAGAACACTTCTCAACAGTTTCTTTTGT
 CCTTTATAATTCACTAAAATAAAGCATCTATTAGTGTCTGATTTAGGAATGTAAA
 ATGATTCTGTATTAATGTAAATAAGATTATCTATTGCAAAAAGATATTTCAAACC
 TAAAA

40

SEQ ID NO: 621

>21224 BLOOD 197014.6 AF095742 g4588081 Human serine protease ovasin mRNA,
complete cds. 0

GTGCAGGAGGAGAAGGAGGAGGAGCAGGAGGTGGAGATTCCCAGTTAAAAGGC
 45 TCCAGAATCGTGTACCAGGCAGAGAACTGAAGTACTGGGGCCTCCTCCACTGGG
 TCCGAATCAGTAGGTGACCCCGCCCCCTGGATTCTGGAAGACCTCACCATGGGACG
 CCCCCGACCTCGTGCGGCCAAGACGTGGATGTTCTGCTCTTGCTGGGGGGGAGCC
 TGGGCAGGACACTCCAGGGCACAGGAGGACAAGGTGCTGGGGGGTTCATGAGTGC
 CAACCCCATTCGCAGCCTTGGCAGGCGGCCTTGTTCCAGGGCCAGCAACTACTCT

GTGGCGGTGTCCTTGTAAGGTGGCAACTGGGTCCTTACAGCTGCCCACTGTAAAAA
ACCGAAATACACAGTACGCCTGGGAGACCACAGCCTACAGAATAAAGATGGCCC
AGAGCAAGAAATACCTGTGGTTCAGTCCATCCCACACCCCTGCTACAACAGCAG
CGATGTGGAGGACCACAACCATGATCTGATGCTTCTTCAACTGCGTGACCAGGCA
5 TCCCTGGGGTCCAAAGTGAAGCCCATCAGCCTGGCAGATCATTGCACCCAGCCTG
GCCAGAAGTGCACCGTCTCAGGCTGGGGCACTGTCACCAAGTCCCCGAGAGAATT
TTCCTGACACTCTCAACTGTGCAGAAAGTAAAAATCTTTCCCCAGAAGAAGTGTGA
GGATGCTTACCCGGGGCAGATCACAGATGGCATGGTCTGTGCAGGCAGCAGCAA
AGGGGCTGACACGTGCCAGGGGCGATTCTGGAGGCCCCCTGGTGTGTGATGGTGC
10 ACTCCAGGGCATCACATCCTGGGGCTCAGACCCCTGTGGGAGGTCCGACAAACC
TGGCGTCTATACCAACATCTGCCGCTACCTGGACTGGATCAAGAAGATCATAGGC
AGCAAGGGCTGATTCTAGGATAAGCACTAGATCTCCCTTAATAAACTCACAACCTC
TCTGGTTC

15 SEQ ID NO: 622

>21240 BLOOD 255990.12 AJ011497 g4128014 Human mRNA for Claudin-7. 0

CCCACGCGTCCGCTCACCTCCGAGCCACCTCTGCTGCGCACCGCAGCCTCGGACC
TACAGCCCAGGATACTTTGGGACTTGCCGGCGCTCAGAAACGCGCCCAGACGGC
CCCTCCACCTTTTGTTCCTAGGGTCGCCGAGAGCGCCCGGAGGGAACCGCCTG
20 GCCTTCGGGGACCACCAATTTTGTCTGGAACCACCTCCCGGCGTATCCTACTCC
CTGTGCCGCGAGGCCATCGCTTCACTGGAGGGGTCGATTTGTGTGTAGTTTGGTG
ACAAGATTTGCATTCACCTGGGCCCAAAACCTTTTGTCTCTTTGGGTGACCGGAA
AACTCCACCTCAAGTTTCTTTTGTGGGGGCTGCCCCCAAGTGTGCTTGTGTTTA
CTGTAGGGTCTCCCCGCGCGGGCGCCCCAGTGTCTTCTGAGGGCGGAAATGGCCA
25 ATTCGGGCCTGCAGTTGCTGGGCTTCTCCATGGGCCCCTGCTGGGCTGGGTGGGTC
TGGTGGCCTGCACCGCCATCCCGCAGTGGCAGATGAGCTCCTATGCGGGTGACA
ACATCATCACGGCCCAGGCCATGTACAAGGGGCTGTGGATGGACTGCGTCACGC
AGAGCACGGGGATGATGAGCTGCAAAATGTACGACTCGGTGCTCGCCCTGTCCG
CGGCCTTGCAAGGCACTCGAGCCCTAATGGTGGTCTCCCTGGTGTGGGCTTCT
30 GGCCATGTTTGTGGCCACGATGGGCATGAAGTGCACGCGCTGTGGGGGAGACGA
CAAAGTGAAGAAGGCCCCGTATAGCCATGGGTGGAGGCATAATTTTCATCGTGGC
AGGTCTTGCCGCTTGGTAGCTTGCTCCTGGTATGGCCATCAGATTGTCACAGAC
TTTTATAACCCTTTGATCCCTACCAACATTAAGTATGAGTTTGGCCCTGCCATCTT
TATTGGCTGGGCAGGGTCTGCCCTAGTCATCCTGGGAGGTGCACTGCTCTCCTGT
35 TCCTGTCTTGGGAATGAGAGCAAGGCTGGGTACCGTGTACCCCGCTCTTACCCTA
AGTCCAACCTCTTCCAAGGAGTATGTGTGACCTGGGATCTCCTTGCCCCAGCCTGA
CAGGCTATGGGAGTGTCTAGATGCCTGAAAGGGCCTGGGGCTGAGCTCAGCCTG
TGGGCAGGGTGCCGGACAAAGGCCCTCTGGTCACTCTGTCCCTGCACTCCATGTA
TAGTCCTCTTGGGTTGGGGGTGGGGGGGTGCCGTTGGTGGGAGAGACAAAAAGA
40 GGGAGAGTGTGCTTTTGTACAGTAATAAAAAATAAGTATTGGGAAGCAGGCTTT
TTTCCCTTCAGGGCCTCTGCTTTCCCTCCCGTCCAGATCCTTGCAGGGAGCTTGAA
CCTTAGTGCACCTACTTCAGTTCAGAACACTTAGCACCCCACTGACTCCACTGAC
AATTGACTAAAAGATGCAGGTGCTCGTATCTCGACATTCATTCCACCCCCCTCT
TATTTAAATAGCTACCAAAGTACTTCTTTTTTAATAAAAAAATAAAGATTTTTATT
45 AGGTAAANAAAAAAAAAA

SEQ ID NO: 623

>21270 BLOOD INCYTE_1381683H1

GCTTATTCACCTTTGTGTTTTCTTTGTTTTATTTTGTCCAATTTTGTCTTTAGCTGTG
TTTATTAACTTCTCCGGTCTTGTTTTGTTTTAATGCTCTTGGCCCAGTGGGTGTCA
AGAACTACTGGCTTAATTCAAGTCAGTTGATTTTTTTTCTATTAAACTGTTGTTAA
AATATTTTTTAAAACAAAAACATTATTTGTGCCCTCTTTTATATATGTCAAAGGGA
5 CACTGTCAAGTATTTCAATT

SEQ ID NO: 624

>21285 BLOOD 1008401.7 M17783 g183063 Human glia-derived nexin (GDN) mRNA, 5'
end. 0

10 GTGTGCTGGCAAAGTGCTTGGCTGCGCGGCGTCTGCAGGCGCCACCGCTGCCTCT
TTCCGGCTGTGACCCTCCTCGCCGCCGCCGCTTCGCTGCGTCTCCGACTCCCCGC
GCCGCCGAGACCAGGCTCCCGCTCCGGTTGCGGCCGCACCGCCCTCCGCGGCCGC
CCCCTGGGGATCCAGCGAGCGCGGTCGTCCTTGGTGGAAGGAACCATGAACTGG
CATCTCCCCCTCTTCTCTTGGCCTCTGTGACGCTGCCTTCCATCTGCTCCCACTTC
15 AATCCTCTGTCTCTCGAGGAACTAGGCTCCAACACGGGGATCCAGGTTTTCAATC
AGATTGTGAAGTCGAGGCCTCATGACAACATCGTGATCTCTCCCCATGGGATTGC
GTCGGTCTTGGGGATGCTTCAGCTGGGGGCGGACGGCAGGACCAAGAAGCAGCT
CGCCATGGTGATGAGATACGGCGTAAATGGAGTTGGTAAAATATTAAAGAAGAT
CAACAAGGCCATCGTCTCCAAGAAGAATAAAGACATTGTGACAGTGGCTAACGC
20 CGTGTTTGTTAAGAATGCCTCTGAAATTGAAGTGCCTTTTGTTACAAGGAACAAA
GATGTGTTCCAGTGTGAGGTCCGGAATGTGAACTTTGAGGATCCAGCCTCTGCCT
GTGATTCCATCAATGCATGGGTAAAAAATGAAACCAGGGATATGATFGACAATCT
GCTGTCCCAGATCTTATTGATGGGTGCTCACCAGACTGGTCTCGTCAACGCA
GTGTATTTCAAGGGTCTGTGGAAATCACGGTTCCAACCCGAGAACACAAAGAAA
25 CGCACTTTCGTGGCAGCCGACGGGAAATCCTATCAAGTGCCAATGCTGGCCCAGC
TCTCCGTGTTCCGGTGTGGGTGACAAAGTGCCCCCAATGATTTATGGTACAACTT
CATTGAACTGCCCTACCACGGGGAAAGCATCAGCATGCTGATTGCACTGCCGACT
GAGAGCTCCACTCCGCTGTCTGCCATCATCCACACATCAGCACCAAGACCATAG
ACAGCTGGATGAGCATCATGGTGCCCAAGAGGGTGCAGGTGATCCTGCCCAAGT
30 TCACAGCTGTAGCACAAACAGATTTGAAGGAGCCGCTGAAAGTTCTTGGCATTAC
TGACATGTTTGATTCATCAAAGGCAAATTTTGCAAAAATAACAAGGTCAGAAAA
CCTCCATGTTTCTCATATCTTGCAAAAAGCAAAAATTGAAGTCAGTGAAGATGGA
ACCAAAGCTTCAGCAGCAACAACCTGCAATTCTCATTGCAAGATCATCGCCTCCCT
GGTTTATAGTAGACAGACCTTTTCTGTTTTTCATCCGACATAATCCTACAGGTGCT
35 GTGTTATTCATGGGGCAGATAAAACAAACCCTGAAGAGTATACAAAAGAAACCAT
GCAAAGCAACGACTACTTTGCTACGAAGAAAGACTCCTTTCCTGCATCTTTCATA
GTTCTGTAAATATTTTTGTACATCGCTTCTTTTTCAAACCTAGTTCTTAGGAACA
GACTCGATGCAAGTGTCTGTTCTGGGAGGTATTGGAGGGAAAAAACAAGCAG
GATGGCTGGAACACTGTACTGAGGAATGAATAGAAAGGCTTCCAGATGTCTAAA
40 AGATTCTTTAACTACTGAACTGTTACCTAGGTAAACAACCCTGTTGAGTATTTGC
TGTTTGTCCAGTTCAGGAATTTTTGTTTTGTTTTGTCTATATGTGCGGCTTTTCAGA
AGAAATTTAATCAGTGTGACAGAAAAAAAATGTTTTATGGTAGCTTTTACTTTT
TATGAAAAAAAATTTATTTGCCTTTTAAATTCTTTTCCCCCATCCCCCTCCAAAGT
CTTGATAGCAAGCGTTATTTTGGGGGTAGAAACGGTGAAATCTCTAGCCTCTTTG
45 TGTTTTTGNTGATGCTGTTGTTGTTGTTTTATATAATGCATGTATTCATAAAATA
AAATTTAAAAAACTCCTGTCTTGCTAGACAAGGTTGCTGTTGTGCAGTGTGACAG
AAAAAAAATGTTTTATGGTAGCTTTTACTTTTTATGAAAAAAAATTTATTTGGC
TTTTAAATTCTTTTCCCCCANCCCCCTCCAAAGTCTTGATAGCAAGCGTTATTTNG
GGGGTAGAAACGGNGAAATCTCTAGCCTCNNNNNNNNNNNNNNNNNNNNNNNNNNNN

NNNNNNNNNNNNNTAATGCATGTATTCACTAAAATAAAATTTAAAAAACTCGA
AGGCTGCTCAGGGCCTTATAAAACTGTTGTAGACAGCCCTGAATGTCCCCTGCTT
CCCACCACCCAGAGCCTGGGATCATGCAAGCTGGGAGAGAAGCTACAGAGGTAG
TGCCGTGTTTGGTGGAGTGACCTCTGCAGCCTCCCTCCCTCAGAGTGAGAATTTT
5 ATGTAATTCTTATCTGCAGTTGGGAATAAAAGAAGTTTGATTCTAGACACTGAA
ATACACGAAAGTTTATCATGCCACCCTTTTCCATCTCTTAGGAGAAATGGAAAAA
GAACACTCCAAACCTGGCCACTACCTGAGGATGTGTAAAGAGGTTTTCTGCAGGC
AATTAGACCCCACTACAGTGGAAGCTTGTAGAACATCACACATCGACAGTCTGA
AATGCACCACAAGAACTGCTCGAAGAGTGTGTCACTTTCACACTTACCTGACCGT
10 GGGATGGAAGTGCAGCGTAAGCCATGGGCTGATTCATCACTCCTTTCTGCTTCAT
GAGAAGCAGGCGTTTCTGGTCTTCGCTCAGGTGTGCCCTGGGGGCCTGGAGCTGT
GGAGGTGNN
NNNNNNNNNNNNNGATATACGGCATCAAGGGGTTTTTGTGTTGGGGTTGGCCACTG
GTGGTGTCTCCTCTGACTCAGGTCTGCATTGAAGTGGGTGAGGGGTTTAGTGTT
15 GCCATAAGTCAGAATATTGTGCTGTTTGTGTTAAGGAGTTTGTACCCAAGTTATTTG
GCTGCTGATTGATCATATTCATGTGATTCTGAGGGAGGTAGTTATTCATTGTTGTC
TTCTGCAGGTTGTTTGCCATTGGAGGCACTATAGGGTTTTGGTTGTAAAGGCTTG
GGGGTACATCATTGGGCTATTTGGTTTTTCTGCAGTAAAAGCTGCTCCATATGGA
CTAGAGGGAGGTCCTAAGGGAGACCAATTTGAAGTCTGATTTGAGNNNNNNNN
20 NNGTTTCTGCTGCATGAGTTT
GGCCCTTTGTTGCTGCTGTGCAGCCATCTGTTTGAGCTGTTCTGCTGGAGACATGT
CAGAGCTGGGCACAGCCACAGGCCCTGACGCTGAACCGGCCACTGTCACTGCTG
CCGGATTTCAGGAGATAACCATTTCCAGGCCGAGGTGGAGCTTGGCCTGGAGTGT
GGGCTTGGTTTGGAGTTTGAGGGGACTGGACAGCACAGTTTGCTGGTGAGCTTGC
25 AGGGTTTGGAGCTGCGGGAGTGCTGGCAACAGAAGGTAAACTAGTGGCCGTGGA
GACAGTAGAAAAGGGGAAGGAACCCAAGGAAGGAAGAAGGCCCTTCGCCCTGG
GGGAGATCCCATGGAGACATGTGCGAAGGGAGAGTGAGAGGGGTGCTCTTCAC
GCTCGCACTCTCCTGGGAGAGAGGGGTCTCAGTTGCTGGCTGCGAGAATTCTGGC
TCCTTCTTCTCTTCAAAGTCTTCGTTGAACAGGTCCCTGTATGTCATCCTCAGGAAC
30 CGTGTGTTGCCAATTCATCTATTAATTCTTGCCACTCCTGATCATTAGATTAAATGT
CTGAGAACAGCTTGTCTGATTTGAAAGAGATGTTTCTGATGTGTCTATGCAAGT
AGGGTCATCGAGAGGTTCTTGTGTTGAGGTCTTTGCTCTGCAAGATGGTGAAGCTA
TCCTCCAGGTCACTGCAACCGTTGACAGGAAGTTTAATCTCAGGGAGCCTACCAT
TCTTACTTAGATCTTCTAGAAGCCCAGGAGTGTGAGTTCCACTGTTCTGCAAGGG
35 CAAAGAAGGTTTCAGGTCAAGTTGGTGAAGAGGAGAAGCTGAAGGCAGTGGCAT
GTTACTGGGCAAATTGTTGATGGCTTCCATCCCCGCAGAAATGTCCTTTTCGAATT
CGTTTGCTAGTCGGAGAAAAATTCCCATCACAAGCACCATTCTGCTGGTCTCCAT
TAAGTGGTGATCGAGCTCCTTCCAACCTCCTTTTACAGTCTCTTGTAGCATGATC
AGCGTGTGGTTCCTCTGCTCCGCCGAGGCAGCCTCCGCATCTTGCTGGGGTTTGC
40 TCGGGTGCTGCTGTTTGCCGGTGCCGGCGCCCGATTCTTGCCCTCTGCTCCAGG
TCCGC

SEQ ID NO: 625

>21292 BLOOD INCYTE_157873H1

45 AGTAGCGTGACTACGTTTAAAACGGAGCAGCCAGGTGCTCCAAGCCCAGGTTTC
ATCTTCCTAACCAAGAAAGGCCGNCAAGTCTGTNCTGACCCCAGTAAGGAGTGG
TTCCAGGAAATACGGTCAGTAACCTGGGANCTGAGTGNCTTANGGGTCCAGAA
CTTNGANGNCCAGGCAACCTGAGTTGGCCCAGNNNGGGAGGAGNAGGGGCCTG
NACCTTGGGGNACATG

SEQ ID NO: 626

>21294 BLOOD INCYTE_1594625F6

GGANATGGAAGGCAATGACNGCNACGAGGGCTCTGTGTGGANATGTTCAAGGNG
5 CTGGCAANAGATCCTNCGATTCAACTACAAGATCCGACTGGTTGGGGATGGNGT
GTACGGCGTTCCNGAGGNACAACGGCACCTGGAAGGGAATGGTNGGNGAGCTG
ATCNCTAGGAAAGCAGTCTGGCNGTGGCAGGCCTCACCATTACAGNTGAACGGG
AGAAGGTGNTTGATTTCTCTAAGC

10 SEQ ID NO: 627

>21298 BLOOD 441249.1 AF086432 g3483777 Human full length insert cDNA clone
ZD79H11.0

GGCAGGAGAATTTGAAAGGGTGCCCCAAAGGACAATCTCTAAAGGGGTAAGGG
AGATACCTACCTTGTCTGGTAGGGGAGATGTTTCGTTTTTCATGCTTTACCAGAAA
15 ATCCACTTCCCTGCCGACCTTAGTTTCAAAGCTTATTCTTAATTAGAGACAAGAA
ACCTGTTTCAACTTGAAGACACCGTATGAGGTGAATGGACAGCCAGCCACCACA
ATGAAAGAAATCAAACCAGGAATAACCTATGCTGAACCCACGCCTCAATCGTCC
CCAAGTGTTCCTGACACGCATCTTTGCTTACAGTGCATCACAACCTGAAGAATGG
GGTTCAACTTGACGCTTGCAAAATTACCAAATAACGAGCTGCACGGCCAAGAGA
20 GTCACAATTCAGGCAACAGGAGCGACGGGCCAGGAAAGAACACCACCCTTCACA
ATGAATTTGACACAATTGTCTTGCCGGTGCTTTATCTCATTATATTTGTGGCAAGC
ATCTTGCTGAATGGTTTAGCAGTGTGGATCTTCTTCCACATTAGGAATAAAACCA
GCTTCATATTCTATCTCAAAAACATAGTGGTTGCAGACCTCATAATGACGCTGAC
TATTTCCATTTCGAATAGTCCATGATGCAGGATTTGGACCTTGGTACTTCAAGTTTA
25 TTCTCTGCAGATACACTTCAGTTTTGTTTTATGCAAACATGTATACTTCCATCGTG
TTCCTTGGGCTGATAAGCATTGATCGCTATCTGAAGGTGGTCAAGCCATTTGGGG
ACTCTCGGATGTACAGCATAACCTTCACGAAGGTTTTATCTGTTTGTGTTTGGGTG
ATCATGGCTGTTTTGTCTTTGCCAAACATCATCTGACAAATGGTCAGCCAACAG
AGGACAATATCCATGACTGCTCAAACTTAAAAGTCCTTTGGGGGTCAAATGGC
30 ATACGGCAGTCACCTATGTGAACAGCTGCTTGTGTTTGTGGCCGTGCTGGTGATTCT
GATCGGATGTTACATAGCCATATCCAGGTACATCCACAAATCCAGCAGGCAATTC
ATAAGTCAGTCAAGCCGAAAGCGAAAACATAACCAGAGCATCAGGGTTGTTGTG
GCTGTGTTTTTTACCTGCTTTCTACCATATCACTTGTGCAGAATTCCTTTTACTTTT
AGTCACTTAGACAGGCTTTTAGATGAATCTGCACAAAAAATCCTATATTACTGCA
35 AAGAAATTACACTTTTCTTGTCTGCGTGTAATGTTTGCCTGGATCCAATAATTTAC
TTTTTCATGTGTAGGTCATTTTCAAGAAGGCTGTTCAAAAAATCAAATATCAGAA
CCAGGAGTGAAAGCATCAGATCACTGCAAAGTGTGAGAAGATCGGAAGTTCGCA
TATATTATGATTACACTGATGTGTAGGCCTTTTATTGTTTGTGGAATCGATATGT
ACAAAGTGTAaaaaaATGTTTCTTTTCATTAAAAAaaaaaaaaaaaaaaaaaAAG
40

SEQ ID NO: 628

>21307 BLOOD 336954.1 AF033383 g2739502 Human potassium channel mRNA,
complete cds. 0

GCTGCTGCGCCGCGCTCCCGGCGCACTCGGAGCCCGGCGGGGACCGGGAGGCAG
45 AGACGGGGGCGGCCGTGGCTCCGAGGGCGGGAGCTGAGCCGGGGCCCCGGGACCG
AAGTTTGGCGGCGGCTCCGGGAGGCAGAGCGGGCTCCCGGGGCGACTTCCAGGC
CCCTCTCGCGTCTCGCCCCGACCCGTGGGCAGCCGGGGGGGACGGAAGCCGC
GGCCGGGCCAACCTCCGAGGCGGGGACGCCGCGACGGGAACCTTGAGGTGGGAAC
TTGCGCGCTGCAGCCTCGCCGGGCGCCACCGAAGCGCGAACCAGGACCCCGAGCC

TGCAAACCTCGGGCTCGGGGGCGGGCTGCACGTGGCCGTGGCCCTGAACTCCCTGC
 GGGGGCCTCGAAACCCGCCTGCGGGGAGGCCAGGGCGACAGAGGACTCGGGAG
 TCACCGCTGGTGCGTGGCGGCGTGGAGCGCGCTTGTACGGCCAAGGGAGCAGG
 CTGCCTAATGAAGGAGCCAGGCTTGACACACAGACAATTCTAGAACTGGTGGCCC
 5 GAGAGGGATGTGAAGGCCCAAATGACCCTCTTACCGGGAGACAATTCTGACTA
 CGACTACAGCGCGCTGAGCTGCACCTCGGACGCCTCCTTCCACCCGGCCTTCCTC
 CCGCAGCGCCAGGCCATCAAGGGCGCGTTCTACCGCCGGGCGCAGCGGCTGCGG
 CCGCAGGATGAGCCCCGCCAGGGCTGTCTGCCCGTAGGACCGCCGCGCTCGGAT
 CATCATCAACGTAGGCGGCATCAAGTACTCGCTGCCCTGGACCACGCTGGACGA
 10 GTTCCCGCTGACGCGCCTGGGCCAGCTCAAGGCCTGCACCAACTTCGACGACATC
 CTAACGTGTGCGATGACTACGACGTCACCTGCAACGAGTTCTTCTTCGACCGCA
 ACCCGGGGGCCTTCGGCACTATCCTGACCTTCCTGCGCGCGGGCAAGCTGCGGCT
 GCTGCGCGAGATGTGCGCGCTGTCCTTCAGGAGGAGCTGCTGTACTGGGGCATC
 GCGGAGGACCACCTGGACGGCTGCTGCAAGCGCCGCTACCTGCAGAAGATTGAG
 15 GAGTTCGCGGAGATGGTGGAGCGGGAGGAAGAGGACGACGCGCTGGACAGCGA
 GGGCCCGCGACAGCGAGGGCCCGGCCGAGGGCGAGGGCCGCCTGGGGCGCTGC
 ATGCGGCGACTGCGCGAACATGGTGGAGAGGCCGCACTCGGGGCTGCCTGGCAA
 AGGTGTTTCGCTGCCTGCTCGGTGCTCTTCGTGACCGTCACCGCCAGTCAACCTCTC
 CGTCAGCACCTTGCCCAGCCTGAGGGAGGAGGAGGAGCAGGGCCACTGTTCCCA
 20 GATGTGCCACAACGTCTTCATCGTGGAGTCGGTGTGCGTGGGCTGGTTCTCCCTG
 GAGTTCCTCCTGCGGCTCATTACGGCGCCAGCAAGTTCGCCTTCCTGCGGAGCC
 CGCTGACGCTGATCGACCTGGTGGCCATCCTGCCCTACTACATCACGCTGCTGGT
 GGACGGCGCCGCGCGGGCCGTCGCAAGCGCGCGGGCAAGAGCTACCTGGA
 CAAGGTGGGGCTGGTGTGCGCGTGTGCGGGCGCTGCGCATCCTGTAGGTGATG
 25 CGCCTGGCGCGCCACTCCCTGGGGCTGCAGACGCTGGGGCTCACGGCCCGCCGCT
 GCACCCGCGAGTTCGGGCTCCTGCTGCTCTTCCTCTGCGTGGCCATCGCCCTCTTC
 GCGCCCCCTGCTCTACGTCATCGAGAACGAGATGGCCGACAGCCCCGAGTTCACC
 AGCATCCCTGCCTGCTACTGGTGGGCTGTCATCACCATGACGACGGTGGGCTATG
 GCGACATGGTCCCCAGGAGCACCCCGGGCCAGGTAGTGGCCCTGAGCAGCATCC
 30 TGAGCGGCATCCTGCTCATGGCCTTCCCAGTCACCTCCATCTTCCACACCTTCTCC
 CGCTCCTACCTGGAGCTCAAGCAGGAGCAAGAGAGGGTTGATGTTCCGGAGGGC
 GCAGTTCCTCATCAAAACCAAGTCGCAGCTGAGCGTGTCCCAGGACAGTGACAT
 CTTGTTTCGGAAGTGCCCTTCCTCGGACACCAAGAGACAATAACTGAGCGCGGAGG
 ACACGCCTGCCCTGCCTGCCATCTGTGGCCCGAAGCCATTTGCCATCCACTGCAA
 35 ACGCCTGGAGAGGGACAGGCCGCTTCCGAGTGCAGTCCTGGCGCAGCACCGACT
 GCCACGCACCCGGGGAAGGACACCCTCACTCCACACCTCCGGGAAGAACACT
 AGAACATCAGCAGAGGGGGCCCTGCCCTCCGCTGCAGCCGTGAAAGGAAGCTG
 GGTGATCAGCCCAGCCCCGCCACCCAGCCCCTATGTGTGTTTCCCTCAATAAG
 GAGATGCCTTGTTCTTTTACCATGCGAATAACATGCCAGCAAAAACCGTGCTT
 40 TATGGGTCTGCCTGGAGAAAAAATACCAACAGCAGAAACAGCAC

SEQ ID NO: 629

>21310 BLOOD 246163.2 AK002158 g7023867 Human cDNA FLJ11296 fis, clone

PLACE1009731, weakly similar to AIG1 PROTEIN. 0

45 CAGCACATCGCTGCATTCGGCTGGTTTTTCAGGGTCTTGTTCCTCAATCAGTTTCCAG
 CCAACACCAGGGTGTCCCTAGTCCGCAGAGGTGTGGGGGACACACTCCATAATC
 TCTACTTTTCTTTTGTGCGAGCTGAGTCATGGAGCTTTCAGCCCCAGCATGGCT
 CCTCCTTAAGTGCCTGCTCAACCTCCCTCAGCCCTGTGAACAGCATCCCCGCA
 CACAGACGCAGAGCAGGACTCTCTGCTGCCACTTCACCTTCCTGAGAGAGGAC

CAGCGGCCAGAGCCTCAGTGACTGCCACCCTGGAGGACAGGGCACAACAACCGT
 TTCTGGAGAGAATGGGAGGATTCCAGAGGGGCAAATATGGAACCTATGGCTGAAG
 GTAGATCAGAAGATAACTTGTCTGCAACACCACCGGCATTGAGGATTATCCTAGT
 GGGCAAAACAGGCTGCGGGAAAAGTGCCACAGGGAACAGCATCCTTGGCCAGCC
 5 CGTGTTTGAGTCCAAGCTGAGGGGCCAGTCAGTGACCAGGACGTGCCAGGTGAA
 AACAGGAACATGGAACGGGAGGAAAGTCCTGGTGGTTGACACGCCCTCCATCTT
 TGAGTCACAGGCCGATACCCAAGAGCTGTACAAGAACATCGGGGACTGCTACCT
 GCTCTCTGCCCCGGGGCCCCACGTCCTGCTTCTGGTGATCCAGCTGGGGCGTTTC
 ACTGCTCAGGACACAGTGGCCATCAGGAAGGTGAAAGAGGTCTTTGGGACAGGG
 10 GCCATGAGACATGTGGTCATCCTCTTCACCCACAAAGAGGACTTAGGGGGCCAG
 GCCCTGGATGACTATGTAGCAAACACGGACAACCTGCAGCCTGAAAGACCTGGTG
 CGGGAGTGTGAGAGAAGGTACTGTGCCTTCAACAACCTGGGGCTCTGTGGAGGAG
 CAGAGGCAGCAGCAGGCAGAGCTCCTGGCTGTGATTGAGAGGCTGGGGAGGGA
 GCGAGAGGGCTCCTTCCACAGCAATGACCTCTTCTTGGATGCCCAGCTGCTCCAA
 15 AGAACTGGAGCTGGGGCCTGCCAGGAAGACTACAGGCAGTACCAGGCCAAAGTG
 GAATGGCAGGTGGAGAAGCACAAGCAAGAGCTGAGGGAGAACGAGAGTAACTG
 GGCATACAAGGCGCTCCTCAGAGTCAAACACTTGATGCTTTTGCATTATGAGATT
 TTTGTTTTTCTATTGTTGTGCAGCATACTTTTTTTCATTATTTTTCTGTTTCATCTTTC
 ATTACATTTAAATCTCTGGACCCTGGAGCACTTCTAATGTATCACCCCATGGAGT
 20 CATTGTTCTAATAATCACCAATTCAGACTCAGATCCTCGTGGTCTATGGAGCATG
 CTGCTTGCTGTCTGTGCAGCTCCCATTTCCCTTCTTCTGATAGACTTGGAGCTG
 TGTGCTCCACTCCAAGGCTGECTGECTGCTGTAAACACTATTCCACTCTGTCTGC
 CAACAACCTGCTTCAGGAATGGGCCTGAGATCCCATGCAGGTCCCTGAGAAGTGA
 GTAAAAGTCCGCAGAGGTGGGGATGGAAGATCTCTCCTTAGATAGAACCTGTCTT
 25 CCTCCCTGGCATTGTGGGGTCTGGGCGTGACACTGGGACTCTCAGCAGCTTTGTG
 CTGCCAACCTGAGATTGAAGGCAGTGCCTCAGAGCAGCACAGAGAGTTGGGGCC
 CCCTGAGCCCTGAGCCACCAGCCCTGCAGCCTGCCCTATCTCCGCATTTCCAGTT
 GTATTAGCCAATAGATTTCTACTTATTTAAGCTATTTGAGCTCCGGGTCTCTTCT
 ACCTGCATTCTAAACATTCAAAGTAATAAAAATTTCTCCAC

SEQ ID NO: 630

>21313 BLOOD 271789.7 M94055 g456678 Human voltage-gated sodium channel mRNA, complete cds. 0

GGAATTTTAGCTGCAGTCTTCTTGGTGCCAGCTTATCAATCCCAAACCTCTGGGTGT
 35 AAAAGATTCTACAGGGCACTTTCTTATGCAAGGAGCTAAACAGTGATTAAAGGA
 GCAGGATGAAAAGATGGCACAGTCAGTGCTGGTACCGCCAGGACCTGACAGCTT
 CCGCTTCTTTACCAGGGAATCCCTTGCTGCTATTGAACAACGCATTGCAGAAGAG
 AAAGCTAAGAGACCCAAACAGGAACGCAAGGATGAGGATGATGAAAATGGCCC
 AAAGCCAAACAGTGACTTGGAAGCAGGAAAATCTCTTCCATTTATTTATGGAGAC
 40 ATTCCTCCAGAGATGGTGTGTCAGTGCCCTGGAGGATCTGGACCCCTACTATATCA
 ATAAGAAAACGTTTATAGTATTGAATAAAGGGAAAGCAATCTCTCGATTCACTG
 CCACCCCTGCCCTTTACATTTTAACTCCCTTCAACCCTATTAGAAAATTAGCTATT
 AAGATTTTGGTACATTCTTTATTCAATATGCTCATTATGTGCACGATTCTTACCAA
 CTGTGTATTTATGACCATGAGTAACCCTCCAGACTGGACAAAGAATGTGGAGTAT
 45 ACCTTTACAGGAATTTATACTTTTGAATCACTTATTTAAAATACTTGCAAGGGGCTT
 TTGTTTAGAAGATTTACATTTTACGGGATCCATGGAATTGGTTGGATTTACAG
 TCATTACTTTTGCATATGTGACAGAGTTTGTGGACCTGGGCAATGTCTCAGCGTT
 GAGAACATTCAGAGTTCTCCGAGCATTGAAAACAATTTCAAGTCATTCCAGGCCTG
 AAGACCATTGTGGGGGCCCTGATCCAGTCAGTGAAGAAGCTTTCTGATGTCATGA

TCTTGACTGTGTTCTGTCTAAGCGTGTTTGGCGCTAATAGGATTGCAGTTGTTTCATG
GGCAACCTACGAAATAAATGTTTGGCAATGGCCTCCAGATAATTCTTCCTTTGAAA
TAAATATCACTTCCTTCTTTAACAATTCATTGGATGGGAATGGTACTACTTTCAAT
AGGACAGTGAGCATATTTAACTGGGATGAATATATTGAGGATAAAAGTCACTTTT
5 ATTTTTTAGAGGGGGCAAAATGATGCTCTGCTTTGTGGCAACAGCTCAGATGCAGG
CCAGTGTCTGAAGGATACATCTGTGTGAAGGCTGGTAGAAACCCCAACTATGG
CTACACGAGCTTTGACACCTTTAGTTGGGCCTTTTTGTCCTTATTTTCGTCTCATGA
CTCAAGACTTCTGGGAAAACCTTTATCAACTGACACTACGTGCTGCTGGGAAAAC
GTACATGATATTTTTTGTGCTGGTCATTTTCTTGGGCTCATTCTATCTAATAAATTT
10 GATCTTGGCTGTGGTGGCCATGGCCTATGAGGAACAGAATCAGGCCACATTGGA
AGAGGCTGAACAGAAGGAAGCTGAATTTTCAGCAGATGCTCGAACAGTTGAAAAA
GCAACAAGAAGAAGCTCAGGCGGCAGCTGCAGCCGCATCTGCTGAATCAAGAGA
CTTCAGTGGTGTGCTGGTGGGATAGGAGTTTTTTCAGAGAGTTCTTCAGTAGCATCT
AAGTTGAGCTCCAAAAGTGAAAAAGAGCTGAAAAACAGAAGAAAGAAAAAGAA
15 ACAGAAAGAACAGTCTGGAGAAGAAGAGAAAAATGACAGAGTCCGAAAATCGG
AATCTGAAGACAGCATAAGAAGAAAAGGTTTCCGTTTTTCCTTGAAGGAAGTA
GGCTGACATATGAAAAGAGATTTTCTTCTCCACACCAGTCCTTACTGAGCATCCG
TGGCTCCCTTTTCTCTCCAAGACGCAACAGTAGGGCGAGCCTTTTCAGCTTCAGA
GGTCGAGCAAAGGACATTGGCTCTGAGAATGACTTTGCTGATGATGAGCACAGC
20 ACCTTTGAGGACAATGACAGCCGAAGAGACTCTCTGTTTCGTGCCGCACAGACAT
GGAGAACGGCGCCACAGCAATGTCAGCCAGGCCAGCCGTGCCTCCAGGGTGCTC
CCCATGCTGCCCATGAATGGGAAGATGCATAGCGCTGTGGACTGCAATGGTGTG
GTCTCCCTGGTTCGGGGGCCCTTCTACCTCACATCTGCTGGGCAGCTCCTACCAG
AGGGCACAACTACTGAAACAGAAATAAGAAAGAGACGGTCCAGTTCTTATCATG
25 TTTCCATGGATTTATTGGAAGATCCTACATCAAGGCAAAGAGCAATGAGTATAGC
CAGTATTTTGACCAACACCATGGAAGAACTTGAAGAATCCAGACAGAAATGCCC
ACCATGCTGGTATAAATTTGCTAATATGTGTTTGATTGGGACTGTTGTAAACCAT
GGTTAAAGGTGAAACACCTTGTC AACCTGGTTGTAATGGACCCATTTGTTGACCT
GGCCATCACCATCTGCATTGTCTTAAATACACTCTTCATGGCTATGGAGCACTAT
30 CCCATGACGGAGCAGTTCAGCAGTGTACTGTCTGTTGGAAACCTGGTCTTCACAG
GGATCTTCACAGCAGAAATGTTTCTCAAGATAATTGCCATGGATCCATATTATTA
CTTTCAAGAAGGCTGGAATATTTTTGATGGTTTTATTGTGAGCCTTAGTTTAATGG
AACTTGGTTTGGCAAATGTGGAAGGATTGTCAGTTCTCCGATCATTCCGGCTGCT
CCGAGTTTTCAAGTTGGCAAATCTTGGCCAACCTCTAAATATGCTAATTAAGATC
35 ATTGGCAATTCTGTGGGGGCTCTAGGAAACCTCACCTTGGTATTGGCCATCATCG
TCTTCATTTTTGCTGTGGTTCGGCATGCAGCTCTTTGGTAAGAGCTACAAAGAATG
TGTCTGCAAGATTTCCAATGATTGTGAACTCCACGCTGGCACATGCATGACTTT
TTCCACTCCTTCCTGATCGTGTTCCGCGTGCTGTGTGGAGAGTGGATAGAGACCA
TGTGGGACTGTATGGAGGTCGCTGGCCAAACCATGTGCCTTACTGTCTTCATGAT
40 GGT CATGGTGATTGGAAATCTAGTGGTTCTGAACCTCTTCTTGGCCTTGCTTTTGA
GTTCTTCAGTTCTGACAATCTTGCTGCCACTGATGATGATAACGAAATGAATAA
TCTCCAGATTGCTGTGGGAAGGATGCAGAAAGGAATCGATTTTGTTAAAAGAAA
AATACGTGAATTTATTCAGAAAGCCTTTGTTAGGAAGCAGAAAGCTTTAGATGAA
ATTAAACCGCTTGAAGATCTAAATAATAAAAAAGACAGCTGTATTTCCAACCATA
45 CCACCATAGAAATAGGCAAAGACCTCAATTATCTCAAAGACGGAAATGGAAC TA
CTAGTGGCATAGGCAGCAGTGTAGAAAAATATGTCGTGGATGAAAGTGATTACA
TGTCATTTATAAACAACCTAGCCTCACTGTGACAGTACCAATTGCTGTTGGAGA
ATCTGACTTTGAAAATTTAAATACTGAAGAATTCAGCAGCGAGTCAGATATGGA
GGAAAGCAAAGAGAAGCTAAATGCAACTAGTTCATCTGAAGGCAGCACGGTTGA

TATTGGAGCTCCCGCCGAGGGAGAACAGCCTGAGGTTGAACCTGAGGAATCCCT
TGAACCTGAAGCCTGTTTTACAGAAGACTGTGTACGGAAGTTCAAGTGTTGTCAG
ATAAGCATAGAAGAAGGCAAAGGGAACTCTGGTGGAAATTTGAGGAAAACATG
CTATAAGATAGTGGAGCACAATTGGTTCGAAACCTTCATTGTCTTCATGATTCTG
5 CTGAGCAGTGGGGCTCTGGCCTTTGAAGATATATACATTGAGCAGCGAAAAACC
ATTAAGACCATGTTAGAATATGCTGACAAGGTTTTCACTTACATATTCATTCTGG
AAATGCTGCTAAAGTGGGTTGCATATGGTTTTCAAGTGTATTTTACCAATGCCTG
GTGCTGGCTAGACTTCCTGATTGTTGATGTCTCACTGGTTAGCTTAACTGCAAATG
CCTTGGGTTACTCAGAACTTGGTGCCATCAAATCCCTCAGAACACTAAGAGCTCT
10 GAGGCCACTGAGAGCTTTGTCCCGGTTTGAAGGAATGAGGGCTGTTGTAAATGCT
CTTTTAGGAGCCATTCCATCTATCATGAATGTACTTCTGGTTTGTCTGATCTTTTG
GCTAATATTCAGTATCATGGGAGTGAATCTCTTTGCTGGCAAGTTTTACCATTGTA
TTAATTACACCACTGGAGAGATGTTTGATGTAAGCGTGGTCAACAACTACAGTGA
GTGCAAAGCTCTCATTGAGAGCAATCAAACCTGCCAGGTGGAAAAATGTGAAAGT
15 AAACCTTGATAACGTAGGACTTGGATATCTGTCTCTACTTCAAGTAGCCACGTTT
AAGGGATGGATGGATATTATGTATGCAGCTGTTGATTCACGAAATGTAGAATTAC
AACCCAAGTATGAAGACAACCTGTACATGTATCTTTATTTTGTCTCTTTATTATT
TTTGGTTTCATTCTTTACCTTGAATCTTTTCATTGGTGTCTCATAGATAACTTCAA
CCAACAGAAAAAGAAGTTTGGAGGTCAAGACATTTTATGACAGAAGAACAGAA
20 GAAATACTACAATGCAATGAAAAAACTGGGTTCAAAGAAACCACAAAAACCCAT
ACCTCGACCTGCTAACAAATTCCAAGGAATGGTCTTTGATTTTGTAAACCAACAA
GTCTTTGATATCAGCATCATGATCCTCATCTGCCTTAACATGGTCAACCATGATGGT
GGGAAACCGATGACCAGAGTCAAGAAATGACAAACATTCTGTACTGGATTAATCT
GGTGTTTATTGTTCTGTTCACTGGAGAATGTGTGCTGAAACTGATCTCTCTCGTT
25 ACTACTATTTCACTATTGGATGGAATATTTTGTATTTTGTGGTGGTCATTCTCTCC
ATTGTAGGAATGTTTCTGGCTGAACTGATAGAAAAGTATTTTGTGTCCCCTACCC
TGTTCCGAGTGATCCGTCTTGCCAGGATTGGCCGAATCCTACGTCTGATCAAAGG
AGCAAAGGGGATCCGCACGCTGCTCTTTGCTTTGATGATGTCCCTTCCTGCGTTGT
TTAACATCGGCCTCCTTCTTTTCTGGTTCATGTTTCATCTACGCCATCTTTGGGATG
30 TCCAATTTTGCCTATGTTAAGAGGGGAAGTTGGGATCGATGACATGTTCAACTTTG
AGACCTTTGGCAACAGCATGATCTGCCTGTTCCAAATTACAACCTCTGCTGGCTG
GGATGGATTGCTAGCACCTATTCTTAATAGTGGACCTCCAGACTGTGACCCTGAC
AAAGATCACCTGGAAGCTCAGTTAAAGGAGACTGTGGGAACCCATCTGTTGGG
ATTTTCTTTTTTGTGAGTTACATCATCATATCCTTCCTGGTTGTGGTGAACATGTA
35 CATCGCGGTCATCCTGGAGAACTTCAGTGTTGCTACTGAAGAAAGTGCAGAGCCT
CTGAGTGAGGATGACTTTGAGATGTTCTATGAGGTTTGGGAGAAGTTTGATCCCG
ATGCGACCCAGTTTATAGAGTTTGCCAAACTTTCTGATTTTGCAGATGCCCTGGA
TCCTCCTCTTCTCATAGCAAAACCCAACAAAGTCCAGCTCATTGCCATGGATCTG
CCCATGGTGAGTGGTGACCGGATCCACTGTCTTGACATCTTATTTGCTTTTACAAA
40 GCGTGTTTTGGGTGAGAGTGGAGAGATGGATGCCCTTCGAATACAGATGGAAGA
GCGATTTCATGGCATCAAACCCCTCCAAGTCTCTTATGAGCCCATTACGACCACG
TTGAAACGCAAACAAGAGGAGGTGTCTGCTATTATTATCCAGAGGGCTTACAGA
CGCTACCTCTTGAAGCAAAAAGTTAAAAAGGTATCAAGTATATACAAGAAAGAC
AAAGGCAAAGAATGTGATGGAACACCCATCAAAGAAGATACTCTCATTGATAAA
45 CTGAATGAGAATTCAACTCCAGAGAAAACCGATATGACGCCTTCCACCACGTCTC
CACCTCGTATGATAGTGTGACCAAACCAGAAAAAGAAAAATTTGAAAAAGACA
AATCAGAAAAGGAAGACAAAGGGAAAGATATCAGGGAAAGTAAAAAGTAAAAA
GAAACCAAGAATTTTCCATTTTGTGATCAATTGTTTACAGCCCGTGATGGTGATG
TGTTTGTGTCAACAGGACTCCACAGGAGGTCTATGCCAAACTGACTGTTTTTAC

AAATGTATACTTAAGGTCAGTGCCTATAACAAGACAGAGACCTCTGGTCAGCAA
 ACTGGAACCTCAGTAAACTGGAGAAATAGTATCGATGGGAGGTTTCTATTTTCACA
 ACCAGCTGACACTGCTGAAGAGCAGAGGCGTAATGGCTACTCAGACGATAGGAA
 CCAATTTAAAGGGGGGAGGGGAAGTTAAATTTTTATGTAAATTCAACATGTGACAC
 5 TTGATAATAGTAATTGTCACCAAGTGTGTTTATGTTTTAACTGCCACACCTGCCATATT
 TTTACAAAACGTGTGCTGTGAATTTATCACTTTTCTTTTAAATTACAGGTTGTTT
 ACTATTATATGTGACTATTTTTGTAAATGGGTTTGTGTTTGGGGAGAGGGATTAA
 AGGGAGGGGAATTCTACATTTCTCTATTGTATTGTATAACTGGATATATTTTAAATG
 GAGGCATGCTGCAATTCTCATTACACATAAAAAAATCACATCACAAAAGGGAA
 10 GAGTTTACTTCTTGTTCAGGATGTTTTTAGATTTTTGAGGTGCTTAAATAGCTAT
 TCGTATTTTTTAAGGTGTCTCATCCAGAAAAAATTTAATGTGCCTGTAAATGTTCCA
 TAGAATCACAAGCATTAAAGAGTTGTTTTATTTTTACATAACCCATTAAATGTAC
 ATGTATATATGTATATATGTAAAAGGGGCGGGAAAAATACATATATATGTATACAC
 ACATGCACACACAGAGATATACACATAACCATTACATTGTCATTACATCCCAGGC
 15 GC

SEQ ID NO: 631

>21321 BLOOD INCYTE_078114H1

ATGTTGGCCAACCTATTGGTCATGGTGGCAATCTATGTCAACCGCCGCTTCCATTT
 20 NCCTATTTATNACCTAATGGCTAATCTGGCTGCTGCAGACTTCTTNTCTGGGTTGG
 CCTACTTCTATCTCATGTTCAACACAGGACCCAATACTCGGNGACTGACTGTNAG
 CACATGGCTCCTTCGTNAGGGCCCTCATTTGACACCAGCCTGAGGGCATCTNTGGCC
 AACTTACTGGNTATTGCAATNGAGAGGCAGATTACGGTTT

25 SEQ ID NO: 632

>21334 BLOOD 345288.5 AF080157 g4185272 Human Ikb kinase-a (IKK-alpha) mRNA, complete cds. 0

CCGGCCTTGGAACAACCTGTGGAACCTGAGGCCGCTTGCCCTCCCGCCCCATGGAG
 CGGCCCCCGGGGCTGCGGCCGGGCGCGGGCGGGCCCTGGGAGATGCGGGAGCG
 30 GCTGGGCACCGGCGGCTTCGGGAACGTCTGTCTGTACCAGCATCGGGAACCTTGAT
 CTCAAAATAGCAATTAAGTCTTGTGCGCTAGAGCTAAGTACCAAAAACAGAGAA
 CGATGGTGCCATGAAATCCAGATTATGAAGAAGTTGAACCATGCCAATGTTGTA
 AAGGCCTGTGATGTTCTGAAGAATTGAATATTTTGATTCATGATGTGCCTCTTCT
 AGCAATGGAATACTGTTCTGGAGGAGATCTCCGAAAGCTGCTCAACAAACCAGA
 35 AAATTGTTGTGGACTTAAAGAAAGCCAGATACTTTCTTTACTAAGTGATATAGGG
 TCTGGGATTTCGATATTTGCATGAAAACAAAATTATACATCGAGATCTAAAACCTG
 AAAACATAGTTCTTCAGGATGTTGGTGGAAAGATAATACATAAAATAATTGATCT
 GGGATATGCCAAAGATGTTGATCAAGGAAGTCTGTGTACATCTTTTGTGGGAACA
 CTGCAGTATCTGGCCCCAGAGCTCTTTGAGAATAAGCCTTACACAGCCACTGTTG
 40 ATTATTGGAGCTTTGGGACCATGGTATTTGAATGTATTGCTGGATATAGGCCTTTT
 TTGCATCATCTGCAGCCATTTACCTGGCATGAGAAGATTAAGAAGAAGGATCCA
 AAGTGTATATTTGCATGTGAAGAGATGTCAGGAGAAGTTCGGTTTAGTAGCCATT
 TACCTCAACCAAATAGCCTTTGTAGTTTAATAGTAGAACCCTGGAACCTGGCT
 ACAGTTGATGTTGAATTGGGACCCTCAGCAGAGAGGAGGACCTGTTGACCTTACT
 45 TTGAAGCAGCCAAGATGTTTTGTATTAAATGGATCACATTTTGAATTTGAAGATAG
 TACACATCCTAAATATGACTTCTGCAAAGATAATTTCTTTTCTGTTACCACCTGAT
 GAAAGTCTTCATTCACTACAGTCTCGTATTGAGCGTGAACTGGAATAAATACTG
 GTTCTCAAGAACTTCTTTCAGAGACAGGAATTTCTCTGGATCCTCGGAAACCAGC
 CTCTCAATGTGTTCTAGATGGAGTTAGAGGCTGTGATAGCTATATGGTTTATTTGT

TTGATAAAAGTAAAACTGTATATGAAGGGCCATTTGCTTCCAGAAGTTTATCTGA
TTGTGTAAATTATATTGTACAGGACAGCAAAATACAGCTTCCAATTATACAGCTG
CGTAAAGTGTGGGCTGAAGCAGTGCATATGTGTCTGGACTAAAAGAAGACTAT
AGCAGGCTCTTTCAGGGACAAAGGGCAGCAATGTTAAGTCTTCTTAGATATAATG
5 CTAACCTTAACAAAAATGAAGAACACTTTGATCTCAGCATCACAACTGAAAG
CTAATTGGAGTTTTTTCACAAAAGCATTTCAGCTTGACTTGGAGAGATACAGCGA
GCAGATGACGTATGGGATATCTTCAGAAAAAATGCTAAAAGCATGGAAAGAAAT
GGAAGAAAAGGCCATCCACTATGCTGAGGTTGGTGTCAATTGGATACCTGGAGGA
TCAGATTATGTCTTTGCATGCTGAAATCATGGAGCTACAGAAGAGCCCCTATGGA
10 AGACGTCAGGGAGACTTGATGGAATCTCTGGAACAGCGTGCCATTGATCTATATA
AGCAGTTAAAACACAGACCTTCAGATCACTCCTACAGTGACAGCACAGAGATGG
TGAAAATCATTGTGCACACTGTGCAGAGTCAGGACCGTGTGCTCAAGGAGCTGTT
TGGTCATTTGAGCAAGTTGTTGGGCTGTAAGCAGAAGATTATTGATCTACTCCCT
AAGGTGGAAGTGGCCCTCAGTAATATCAAAGAAGCTGACAATACTGTCATGTTT
15 ATGCAGGGAAAAAGGCAGAAAGAAATATGGCATCTCCTTAAAATTGCCTGTACA
CAGAGTTCTGCCCGGTCCCTTGTAGGATCCAGTCTAGAAGGTGCAGTAACCCCTC
AGACATCAGCATGGCTGCCCCCGACTTCAGCAGAACATGATCATTCTCTGTCATG
TGTGGTAACTCCTCAAGATGGGGAGACTTCAGCACAAATGATAGAAGAAAATTT
GAACTGCCTTGGCCATTTAAGCACTATTATTCATGAGGCAAATGAGGAACAGGG
20 CAATAGTATGATGAATCTTGATTGGAGTTGGTTAACAGAATGAGTTGTCACCTGT
TCACTGTCCCCAAACCTATGGAAGTTGTTGCTATACATGTTGGAAATGTGTTTTTC
CCCCATGAAACCATTCTTCAGACATCAGTCAATGGAAGAAATGGCTATGAACAG
AAACTACATTTCTACTATGATCAGAAGAACATGATTTTACAAGTATAACAGTTTT
GAGTAATTCAAGCCTCTAAACAGACAGGAATTTAGAAAAAGTCAATGTACTTGTT
25 TGAATATTTGTTTTAATACCACAGGTATTTAGAAGCATCATCACGACACATTTGC
CTTCAGTCTTGGTAAACATTACTTATTTAACTGATTAAAAATACCTTCTATGTAT
TAGTGTCAACTTTTAACTTTTGGGCGTAAGACCAAATGTAGTTTTGTATACAGAG
AAGAAAACCTCAAGTAATAGGCATTTTAAAGTAAAAGTCTACCTGTGTTTTTTCT
AAAAAGGCTGCTCACAAGTTCTATTTCTTGAAGAATAAATTCTACCTCCTTGTGTT
30 GCACTGAACAGGTTCTCTTCTGTCATCATAAGGAGTTGGTGTAAATCATTTTAAA
TTCCACTGAAAATTTAACAGTATCCCCTTCTCATCGAAGGGATTGTGTATCTGTGC
TTCTAATATTAGTTGGCTTTCATAAATCATGTTGTTGTGTGTATATGTATTTAAGA
TGTACATTTAATAATATCAAAGAGAAGATGCCTGTTAATTTATAATGTATTTGAA
AATTACATGTTTTTTTCAATTTGTAAAAATGAGTCATTTGTTTAAACAATCTTTCATG
35 TCTTGTCATACAAATTTATAAAGGTCTGCACTCCTTTATCTGTAATTGTAATTCCA
AAATCCAAAAAGCTCTGAAAACAAGGTTTCCATAAGCTTGGTGACAAAATTCATT
TGCTTGCAATCTAATCTGAACTGACCTTGAATCTTTTTATCCCATTTAGTGTGAAT
ATTCCTTTATTTTGCTGCTTGATGATGAGAGGGAGGGCTGCTGCCACAGACTGTG
GTGAGGGCTGGTTAATGTAGTATGGTATATGCACAAAACACTTTTCTAAAATCT
40 AAAATTTTATAATTCTGAAACAACCTTGCCCCAAGGGTTTCAGAGAAAGGACTGTG
GACCTCTATCATCTGCTAAGTAATTTAGAAGATATTATTTGTCTTAAAAAATGTG
AAATGCTTTTATATTCTAATAGTTTTTCACTTTGTGTATTAAATGGTTTTTAAATTA
ANAAAAA

45 SEQ ID NO: 633

>21349 BLOOD 441249.1 AF086432 g3483777 Human full length insert cDNA clone
ZD79H11.0

GGCAGGAGAATTTGAAAGGGTGCCCCAAAGGACAATCTCTAAAGGGGTAAGGG
AGATACCTACCTTGTCTGGTAGGGGAGATGTTTCGTTTTTCATGCTTTACCAGAAA

ATCCACTTCCCTGCCGACCTTAGTTTCAAAGCTTATTCTTAATTAGAGACAAGAA
 ACCTGTTTCAACTTGAAGACACCGTATGAGGTGAATGGACAGCCAGCCACCACA
 ATGAAAGAAATCAAACCAGGAATAACCTATGCTGAACCCACGCCTCAATCGTCC
 CCAAGTGTTTCCTGACACGCATCTTTGCTTACAGTGCATCACAACCTGAAGAATGG
 5 GGTTCAACTTGACGCTTGCAAAATTACCAAATAACGAGCTGCACGGCCAAGAGA
 GTCACAATTCAGGCAACAGGAGCGACGGGCCAGGAAAGAACACCACCCTTCACA
 ATGAATTTGACACAATTGTCTTGCCGGTGCTTTATCTCATTATATTTGTGGCAAGC
 ATCTTGCTGAATGGTTTAGCAGTGTGGATCTTCTTCCACATTAGGAATAAAACCA
 GCTTCATATTCTATCTCAAAAACATAGTGGTTGCAGACCTCATAATGACGCTGAC
 10 ATTTCCATTTTGAATAGTCCATGATGCAGGATTTGGACCTTGGTACTTCAAGTTTA
 TTCTCTGCAGATACTTTCAGTTTTGTTTTATGCAAACATGTATACTTCCATCGTG
 TTCCTTGGGCTGATAAGCATTGATCGCTATCTGAAGGTGGTCAAGCCATTTGGGG
 ACTCTCGGATGTACAGCATAACCTTCACGAAGGTTTTATCTGTTTGTGTTTGGGTG
 ATCATGGCTGTTTTGTCTTTGCCAAACATCATCCTGACAAATGGTCAGCCAACAG
 15 AGGACAATATCCATGACTGCTCAAACTTAAAAGTCCTTTGGGGGTCAAATGGC
 ATACGGCAGTCACCTATGTGAACAGCTGCTTGTGTGGCCGTGCTGGTGATTCT
 GATCGGATGTTACATAGCCATATCCAGGTACATCCACAAATCCAGCAGGCAATTC
 ATAAGTCAGTCAAGCCGAAAGCGAAAACATAACCAGAGCATCAGGGTTGTTGTG
 GCTGTGTTTTTTACCTGCTTTCTACCATATCACTTGTGCAGAATTCCTTTTACTTTT
 20 AGTCACTTAGACAGGCTTTTAGATGAATCTGCACAAAAAATCCTATATTACTGCA
 AAGAAATTACACTTTTCTTGCTGCGTGTAATGTTTGCCTGGATCCAATAATTTAC
 TTTTTCATGTGTAGGTCATTTTCAAGAAGGCTGTTCAAAAAATCAAATATCAGAA
 CCAGGAGTGAAAGCATCAGATGACTGCAAAGTGTGAGAAGATCGGAAGTTCGCA
 TATATTATGATTACACTGATGTGTAGGCCTTTTATTGTTTGTGGAATCGATATGT
 25 ACAAAGTGTAATAAAATGTTTCTTTTCATTAAAAAAG

SEQ ID NO: 634

>21357 BLOOD 332459.2 AF216312 g6911218 Human type II membrane serine protease mRNA, complete cds. 0

30 CAGGTTACAAGACACATAATCATTCCAGTTTGGCGAGGTCACTTGTAGGGCTGTT
 TTAATCAAGCTGCCCAAAGTCCCCCAATCACTCCTGGAATACACAGAGAGAGGC
 AGCAGCTTGCTCAGCGGACAAGGATGCTGGGCGTGAGGGACCAAGGCCTGCCCT
 GCACTCGGGCCTCCTCCAGCCAGTGCTGACCAGGGACTTCTGACCTGCTGGCCAG
 CCAGGACCTGTGTGGGGAGGCCCTCCTGCTGCCTTGGGGTGACAATCTCAGCTCC
 35 AGGCTACAGGGAGACCGGGAGGATCACAGAGCCAGCATGGATCCTGACAGTGAT
 CAACCTCTGAACAGCCTCGATGTCAAACCCCTGCGCAAACCCCGTATCCCCATGG
 AGACCTTCAGAAAGGTGGGGATCCCCATCATCATAGCACTACTGAGCCTGGCGA
 GTATCATCATTGTGGTTGTCTCATCAAGGTGATTCTGGATAAATACTACTTCCTC
 TGCGGGCAGCCTCTCCACTTCATCCCGAGGAAGCAGCTGTGTGACGGAGAGCTG
 40 GACTGTCCCTTGGGGGAGGACGAGGAGCACTGTGTCAAGAGCTTCCCCGAAGGG
 CCTGCAGTGGCAGTCCGCCTCTCCAAGGACCGATCCACACTGCAGGTGCTGGACT
 CGGCCACAGGGAAGTGGTTCTCTGCCTGTTTCGACAACTTCACAGAAGCTCTCGC
 TGAGACAGCCTGTAGGCAGATGGGCTACAGCAGCAAACCCACTTTCAGAGCTGT
 GGAGATTGGCCCAGACCAGGATCTGGATGTTGTTGAAATCACAGAAAACAGCCA
 45 GGAGGCTTCGCATGCGGAAGTCAAGTGGGCCCTGTCTCTCAGGCTCCCTGGTCTC
 CCTGCACTGTCTTGCTGTGGGAAGAGCCTGAAGACCCCCCGTGTGGTGGGTGGG
 GAGGAGGCCTCTGTGGATTCTTGGCCTTGGCAGGTCAGCATCCAGTACGACAAAC
 AGCACGTCTGTGGAGGGAGCATCCTGGACCCCCACTGGGTCTCACGGCAGCCC
 ACTGCTTCAGGAAACATACCGATGTGTTCAACTGGAAGGTGCGGGCAGGCTCAG

ACAAACTGGGCAGCTTCCCATCCCTGGCTGTGGCCAAGATCATCATCATTGAATT
 CAACCCCATGTACCCCAAAGACAATGACATCGCCCTCATGAAGCTGCAGTTCCCA
 CTCACCTTTCTCAGGCACAGTCAGGCCCATCTGTCTGCCCTTCTTTGATGAGGAGCT
 CACTCCAGCCACCCCACTCTGGATCATTGGATGGGGCTTTACGAAGCAGAATGGA
 5 GGGAAGATGTCTGACATACTGCTGCAGGCGTCAGTCCAGGTCATTGACAGCACA
 CGGTGCAATGCAGACGATGCGTACCAGGGGGAAGTCACCGAGAAGATGATGTGT
 GCAGGCATCCCGGAAGGGGGTGTGGACACCTGCCAGGGTGACAGTGGTGGGCCC
 CTGATGTACCAATCTGACCACTGGCATGTGGTGGGCATCGTTAGCTGGGGCTATG
 GCTGCGGGGGGCCCCGAGCACCCAGGAGTATACACCAAGGTCTCAGCCTATCTCA
 10 ACTGGATCTACAATGTCTGGAAGGCTGAGCTGTAATGCTGCTGCCCTTTGCAGT
 GCTGGGAGCCGCTTCCTTCCTGCCCTGCCACCTGGGGATCCCCCAAAGTCAGAC
 ACAGAGCAAGAGTCCCCTTGGGTACACCCCTCTGCCACAGCCTCAGCATTCTT
 GGAGCAGCAAAGGGCCTCAATTCCTATAAGAGACCCTCGCAGCCCAGAGGCGCC
 CAGAGGAAGTCAGCAGCCCTAGCTCGGCCACACTTGGTGCTCCCAGCATCCCAG
 15 GGAGAGACACAGCCCACTGAACAAGGTCTCAGGGGTATTGCTAAGCCAAGAAGG
 AACTTTCCCACTACTGAATGGAAGCAGGCTGTCTTGTAAGCCAGATCACT
 GTGGGCTGGAGAGGAGAAGGAAAGGGTCTGCGCCAGCCCTGTCCGTCTTCACCC
 ATCCCCAAGCCTACTAGAGCAAGAAACAGTTGTAATATAAAATGCACTGCCCT
 ACTGTTGGTATGACTACCGTTACCTACTGTTGTATTGTTATTACAGCTATGGCCA
 20 CTATTATTAAAGAGCTGTGTAACATCTCTGGCAAAA

SEQ ID NO: 635
 >21372.BLOOD 413969.2 U38431.g4096733.Human clone rasi-6 matrix metalloprotease
 RASI-1 mRNA, splice variant, complete cds. 0

25 GGCACGAGCCAAGGCTCCCAGAAATCTCAGGTCAGAGGCACGGACAGCCTCTGG
 AGCTCTCGTCTGGTGGGACCATGAACTGCCAGCAGCTGTGGCTGGGCTTCCTACT
 CCCCATGACAGTCTCAGGCCGGGTCTGGGGCTTGCAAGAGGTGGCGCCCGTGGA
 CTACCTGTCACAATATGGGTACCTACAGAAGCCTCTAGAAGGATCTAATAACTTC
 AAGCCAGAAGATATCACCGAGGCTCTGAGTCTCAGGTCAGCTGGATGATGCCAC
 30 AAGGGCCCGCATGAGGCAGCCTCGTTGTGGCCTAGAGGATCCCTTCAACCAGAA
 GACCCTTAAATACCTGTTGCTGGGCCGCTGGAGAAAGAAGCACCTGACTTTCCGC
 ATCTTGAACCTGCCCTCCACCCTTCCACCCACACAGCCCGGGCAGCCCTGCGTC
 AAGCCTTCCAGGACTGGAGCAATGTGGCTCCCTTGACCTTCCAAGAGGTGCAGGC
 TGGTGCGGCTGACATCCGCCTCTCCTTCCATGGCCGCCAAAGCTCGTACTGTTCC
 35 AATACTTTTGATGGGCCTGGGAGAGTCCTGGCCCATGCCGACATCCCAGAGCTGG
 GCAGTGTGCACTTCGACGAAGACGAGTTCTGGACTGAGGGGACCTACCGTGGGG
 TGAACCTGCGCATCATTGCAGCCCATGAAGTGGGCCATGCTCTGGGGCTTGGGCA
 CTCCCGATATTCCCAGGCCCTCATGGCCCCAGTCTACGAGGGCTACCGGCCCCAC
 TTAAAGCTGCACCCAGATGATGTGGCAGGGATCCAGGCTCTCTATGGCAAGAAG
 40 AGTCCAGTGATAAGGGATGAGGAAGAAGAAGAGACAGAGCTGCCCACTGTGCC
 CCAGTGCCACAGAACCAGTCCCATGCCAGACCCTTGCAGTAGTGAAGTGGAT
 GCCATGATGCTGGGTGAGGCCCTCCCTCCAGGCTGTTGGCAGGCGGTGGGGG
 CAGCCTGCTGATCCTGAGGCCTGGACAAATGGGAGTGACATGGGACTTCAGCAT
 GAGCAATGGAGGGCCCCGTGGGAAGACCTATGCTTTCAAGGGGGACTATGTGTG
 45 GACTGTATCAGATTCAGGACCGGGGCCCTTGTTCGAGTGTCTGCCCTTTGGGAG
 GGGCTCCCCGGAACCTGGATGCTGCTGTCTACTCGCCTCGAACACAATGGATTC
 ACTTCTTTAAGGGAGACAAGGTGTGGCGCTACATTAATTTCAAGATGTCTCCTGG
 CTTCCCCAAGAAGCTGAATAGGGTAGAACCTAACCTGGATGCAGCTCTCTATTGG
 CCTCTCAACCAAAAAGGTGTTCTCTTTAAGGGCTCCGGGTACTGGCAGTGGGACG

AGCTAGCCCGAACTGACTTCAGCAGCTACCCCAAACCAATCAAGGGTTTGTTTAC
 GGGAGTGCCAAACCAGCCCTCGGCTGCTATGAGTTGGCAAGATGGCCGAGTCTA
 CTTCTTCAAGGGCAAAGTCTACTGGCGCCTCAACCAGCAGCTTCGAGTAGAGAA
 AGGCTATCCCAGAAATATTTCCCACTGGATGCACTGTCGTCCCCGGACTATA
 5 GACACTACCCCATCAGGTGGGAATACCACTCCCTCAGGTACGGGCATAACCTTGG
 ATACCACTCTCTCAGCCACAGAAACCACGTTTGAATACTGACTGCTCACCCACAG
 ACACAATCTTGGACATTAACCCCTGAGGCTCCACCACCCACCCTTTCATTTCCCCC
 CCAGAAGCCTAAGGCCTAATAGCTGAATGAAATACCTGTCTGCTCAGTAGAACCT
 TGCAGGTGCTGTAGCAGGCGCAAGACCGTAGATCTCAGGCCTCTAACACTTCCAA
 10 CTCCAGCCACCCTTTCCTGTGCATTTTCACTCCTGAGAAGTGCTCCCCTAACTCA
 GATCCCCTAACTTAGATTTGGCCCCCACTCCATTTCTGTCTGTCTTAGACAGCC
 CTTCCAACCTGTGTCATCTCTTCTCTGGAGGTCAATGGTGGAGGGAGATGCCTGGG
 TCCTGTTCTTCTACATAAAATGCAAGAAAACAGCATGGCCAGTAACTGAGCA
 AGGGCCTTGAATCCTTGAGAATCACATTTATGTGCTTATGATTACGGGCAAGCT
 15 AATTAACCTTGTTGAATCTCAGATTCCCCATTTGCAACATTAGGTAAAGACCAGT
 ACTGCAGGATTGTTGCACTAAATGAAATACTGTATGTGAAGTGCTGGCACAGTG
 TCTGGTACATTTGTGTTTAATAAAAAGCTAACTCCATGTTTCAT

SEQ ID NO: 636

20 >21384 BLOOD 403324.1 AF027957 g2739108 Human G-protein-coupled receptor
 (GPR35) gene, complete cds. 0

TGGGAAGAGGATCTGTCCAGGGGTTAGACCTTCAAGGGTGACTTGGAGTTCTTTA
 GGGCAACCATGCTTTCTTGAGGAGTTTGTGTTTGTGGGTGTGGGGTCTGGGGCTC
 ACCTCCTCCCACATCCTGCCCCAGAGGTGGGCAGAGTGGGGGCAGTGCCTTGCTCC
 25 CCCTGCTCGCTCTCTGCTGACTCCGGCTCCCTGTGCTGCCCCAGGACCATGAATG
 GCACCTACAACACCTGTGGCTCCAGCGACCTCACCTGGCCCCAGCGATCAAGCT
 GGGCTTCTACGCCTACTTGGGCGTCTGCTGGTGCTAGGCCTGCTGCTCAACAGC
 CTGGCGCTCTGGGTGTTCTGCTGCCGCATGCAGCAGTGGACGGAGACCCGCATCT
 ACATGACCAACCTGGCGGTGGCCGACCTCTGCCTGCTGTGCACCTTGCCCTTCGT
 30 GCTGCACTCCCTGCGAGACAGCCTCAGACACGCCGCTGTGCCAGCTCTCCCAGGG
 CATCTACCTGACCAACAGGTACATGAGCATCAGCCTGGTCACGGCCATCGCCGTG
 GACCGCTATGTGGCCGTGCGGCACCCGCTGCGTGCCCGCGGGCTGGCGGTCCCCC
 AGGCAGGCTGCGGCCGTGTGCGCGGTCTCTGGGTGCTGGTCATCGGCTCCCTGG
 TGGCTCGCTGGCTCCTGGGGATTGAGGAGGGCGGCTTCTGCTTACAGGAGCACCCG
 35 GCACAATTTCAACTCCATGGCGTTCCCGCTGCTGGGATTCTACCTGCCCCCTGGCC
 GTGGTGGTCTTCTGCTCCCTGAAGGTGGTGACTGCCCTGGCCCAGAGGCCACCCA
 CCGACGTGGGGCAGGCAGAGGCCACCCGCAAGGCTGCCCGCATGGTCTGGGCCA
 ACCTCCTGGTGTTCGTGGTCTGCTTCTGCCCCCTGCACGTGGGGCTGACAGTGCG
 CCTCGCAGTGGGCTGGAACGCCTGTGCCCTCCTGGAGACGATCCGTCGCGCCCTG
 40 TACATAACCAGCAAGCTCTCAGATGCCAACTGCTGCCTGGACGCCATCTGCTACT
 ACTACATGGCCAAGGAGTTCCAGGAGGCGTCTGCACTGGCCGTGGCTCCCCGTGC
 TAAGGCCACAAAAGCCAGGACTCTCTGTGCGTGACCCTCGCCTAAGAGGCGTG
 CTGTGGGCGCTGTGGGCCAGGTCTCGGGGGCTCCGGGAGGTGCTGCCTGCCAGG
 GGAAGCTGGAACCAAGTAGCAAGGAGCCCGGGATCAGCCCTGAACTCACTGTGTA
 45 TTCTCTTGGAGCCTTGGGTGGGCAGGGACGGCCCAGGTACCTGCTCTCTTGGGAA
 GAGAGAGGGACAGGGACAAGGGCAAGAGGACTGAGGCCAGAGCAAGGCCAATG
 TCAGAGACCCCCGGGATGGGGCCTCACACTTGCCACCCCCAGAACCAGCTCACCT
 GGCCAGAGTGGGTTCCTGCTGGCCAGGGTGCAGCCTTGATGACACCTGCCGCTGC
 CCCTCGGGGCTGGAATAAACTCCCCACCCAGAGTCAGTCCTAGTGGGGGCCCTCT

GTGTTTCGCACTCGTGTGGTGGGAGGCAGGGAGGGAGCGCGTGGCTCGGAGGGG
 TGGCGGACATCTTCCAGGGACCCCTTCGGGGCTCTTCACTTTGAGGTCCCCCTTGG
 ACCCTTTACCCCTTCCCACCCCCACCCACCTGGAGCGTGAGCAGGGGCTGTTGG
 AAGCTCCTGGCAGGACCACAGTAGAGGCCCCAGCCCAGGTTTCCTTGCTCAAG
 5 ACAGGGCTGGGAGCAGCTGATCTCCATGTAGGGGCTGCAACAGCGGTGCAAGGG
 GGGGTGAACCAAGGTCAAGCAGGTGAGGGTGGGTGGGGTGGGTGGCAGTGAA
 GGGGGTGGCCAGGGTCTGTCAAGGAACCCAGCCCTCTTCTCCTTCCTTCAGGNAC
 AGGCTGGAACCATNTCTAGGCAGGGGCAGGGGTGGGTGCCCCTCAGGTAAAG
 GCACGATGTCCTGCTGGTTTC

10

SEQ ID NO: 637

>21387 BLOOD 014253.1 CAA04483.1 g2326776 sodium/glucose symporter-like protein
 8e-42

CTGGCAGCAATGGGGCCTGGAGCTTCAGGGGACGGGGTCAGGACTGAGACAGCT
 15 CCACACATAGCACTGGACTCCAGAGTTGGTCTGCACGCCTACGACATCAGCGTGG
 TGGTCATCTACTTTGTCTTCGTCATTGCTGTGGGGATCTGGTCGTCCATCCGTGCA
 AGTCGAGGGACCATTGGCGGCTATTTCTGCGCCGGGAGGTCCATGAGCTGGTGG
 CCAATTGGAGCATCTCTGATGTCCAGCAATGTGGGCAGTGGCTTGTTTCATCGGCC
 TGGCTGGGACAGGGGCTGCCGGAGGCCTTGCCGTAGGTGGCTTCGAGTGGAACG
 20 CAACCTGGCTGCTCCTGGCCCTTGGCTGGGTCTTCGTCCCTGTGTACATCGCAGC
 AGGTGTGGTCACAATGCCGCAGTATCTGAAGAAGCGATTTGGGGGCCAGAGGAT
 CGAGGTGTACATGTCCTGTCTCTCATCCTCTACATCTTCACCAAGATCTCGG
 TAGGTGTCACTGCAATGTGGTCACTGTGTCTGGAAATGCTAATTAGGGAACTGCT
 GAGTGCATCACCATGTGCGTGTGTGCTGAGGGGAAGCTGACAATCACTGTTGAAA
 25 AAAAGGAAAGCAGGACCTATAAACATTTAATGCATGTTCTGCCTCAGCACTGGG
 GTAC

SEQ ID NO: 638

>21390 BLOOD 300437.18 M94046 g187393 Human zinc finger protein (MAZ) mRNA. 0

GAATTCGGGGGGTTCCGGCGCTCCGCGGCCCAAGCGCCCTCCTTTCCTCCCTCC
 30 GCCGGCCGGGGTTGCGGGCGCGGGGCGCCGCGGGCCATGCGATCTCGGCGCGGGC
 CCAGCCCCGGCCGGCGGCGCCCCGCCCCCGCTGGAGCCCTGGGGGCCCCGCTGCG
 GCCGAGGCCATGTTCCCGGTGTTTCCTTGACGCTGCTGGCCCCCCCCCTTCCCCGT
 GCTGGGCCTGGACTCCCGGGGGGTGGGCGGCCTCATGAACTCCTTCCCGCCACCT
 35 CAGGGTCACGCCAGAACCCCTGCAGGTGCGGGCTGAGCTCCAGTCCCGCTTCT
 TTGCCTCCCAGGGCTGCGCCCAGAGTCCATTCCAGGCCGCGCCGGCGCCCCCGCC
 CACGCCCCAGGCCCGGCGGCGGAGCCCTCCAGGTGGACTTGCTCCCGGTGCTC
 GCCGCCGCCAGGAGTCCGCCGCGGCTGCTGCGGCCTGCTGCCGCCGCTGCTGCC
 GCCGTGCTGCCGCGCCCCCGGCCCTGCCGCCGCTCTACGGTGGACACAGCGG
 40 CCCTGAAGCAGCCTCCGGCGCCCCCTCCGCCACCCCGCCAGTGTCGGCGCCCCG
 GGCCGAGGCCGCGCCCCCGCCTCCGCCGCCACTATCGCCGCGGCGGCGGCCAC
 CGCCGTGCTAGCCCCAACCTCGACGGTCGCCGTGGCCCCGGTCGCGTCTGCCTTG
 GAGAAGAAGACAAAGAGCAAGGGGCCCTACATCTGCGCTCTGTGCGCCAAGGAG
 TTCAAGAACGGCTACAATCTCCGGAGGCACGAAGCCATCCACACGGGAGCCAAG
 45 GCCGGCCGGGTCCCCTCGGGTGCTATGAAGATGCCGACCATGGTGCCCCCTGAGCC
 TCCTGAGCGTGCCCCAGCTGAGCGGAGCCGGCGGGGGAGGGGGAGAGGCGGGT
 GCCGGCGGCGGCGCTGCCGCAGTGGCCGCGGTGGCGTGGTGACCACGACCGCC
 TCGGGGGAAGCGCATCCGGAAGAACCATGCCTGCGAGATGTGTGGCAAGGCCTT
 CCGCGACGTCTACCACCTGAACCGACACAAGCTGTGCGCACTCGGACGAGAAGCC

CTACCAGTGCCCGGTGTGCCAGCAGCGCTTCAAGCGCAAGGACCGCATGAGCTA
 CCACGTGCGCTCACATGACGGCGCTGTGCACAAGCCCTACAACCTGCTCCCACTGT
 GGCAAGAGCTTCTCCCGGCCGGATCACCTCAACAGTCACGTCAGACAAGTGCAC
 TCAACAGAACGGCCCTTCAAATGTGAGAAATGTGAGGCAGCTTTCGCCACGAAG
 5 GATCGGCTGCGGGCGCACACAGTACGACACGAGGAGAAAGTGCCATGTCACGTG
 TGTGGCAAGATGCTGAGCTCGGCTTATATTTTCGGACCACATGAAGGTGCACAGCC
 AGGGTCCTCACCATGTCTGTGAGCTCTGCAACAAAGGTAAGTGGTGAGGTTTGTCC
 AATGGCGGGCGGCAGCGGGCGGCGGCAGCGGCAGCGGGCGGCAGCGGCAGCAGCGG
 CAGCAGTAGCAGCCCCCTCCACAGCTGTGGGCTCCCTCTCGGGGGCGGAGGGGG
 10 TGCCTGTGAGCTCTCAGCCACTTCCCTCCCAACCCTGGTGAGCTCCAAGTTGGTT
 GCGGGGGGAGAGGGGAGAATGGAGTAGAGTCCCTTGGTACAAGCTCCTCTCCCCC
 CTCTTTTCCCACTCCTATTTCCCTACCAACCAAGGAGCCTCCAGAAGGAAA
 GGAGGAAGAAATGTTTTCTTAGGGGAATTCGCTAGGTTTTAACGATTTGTTTCTC
 CTGCTCCTCTTCTATCAGACCTGACCCACACAAACCTGTCCCCTCGGTTGTGTTG
 15 AAGTCCCCTGGACAGTGGGCAGGGGTGGCAGAGGACACGAGCAGCCACTGCCCCG
 TACCCCTCTCCTCTCTGTAAGCCCATGCCCTGTCTTCCCAGGGACTTGTGAGCCT
 CTTCCCTCGACGGTCCTCTTCTCTCCTTCCAGTCCTCTCCCCCTGCTGTCTGCAGCC
 CCTCCCCGGGGAGTTGGTGCTTTCTTTTCTTTTTTTTTTTTCCCAGGGGGAGGGAG
 GAGAGGAAGGAGGGGGATCAGAGCTGTCCCAAAGAGGGAAAGCGGTGAGGTTT
 20 GAGGAGGGGCAGAAGCAGGGCCGGCAAAGGTTGTACCTTCATAAGGTGGTATGG
 GGGGTTGGGGTCAGGCCCTGAACATCGTCCTACTTGAGAATCTGTCAGGGGAAA
 AAGTCAAGGGGAGCAGGAGGAAGAGCCAGGAGGGCCAGAGGCAGAGAAGAGA
 TGGAGTCTTAGGGGCCAGGGTGAGCGAGGGGTCCAGGGCCTAGAGGTGCTTCCT
 TGGGGGGGGGGAATGCAGCCAGTGTCCCGCTCCCTCTTCCACCCAGCTCCAGC
 25 CCTGGTCTTGTCTTTTCATCCCTCTTCCCCACGACAGAAGAAGTTGTGCCCTGGC
 CATGTCATCGTGTTCCTGTGTCCCCTGCATGTACCCACCCCTCCACCCCTTCCTTT
 TGC GCGGACCCATTACAATAAATTTTAAATAAAATCCTGTTTCTGGCTCTGGAA
 AA

30 SEQ ID NO: 639

>21406 BLOOD 040519.2 AF103796 g4185795 Human placenta-specific ATP-binding cassette transporter (ABCP) mRNA, complete cds. 0

GCGCCTCCCACGCCGGCCGCCGCGACGTGATCGCTCGGGCGCGCCGGGGCGTGG
 TTGGGGGAAGGGGTTGTGCCGCGCGACGGTCTGCGTGCTGTGCCACTCAAAAG
 35 GTTCCGGGCGCGCAGGAGGGAAGAGGCAGTGCTCGCCACTCCCACTGAGATTGA
 GAGACGCGGCAAGGAGGCAGCCTGTGGAGGAACTGGGTAGGATTTAGGAACGC
 ACCGTGCACATGCTTGGTGGTCTTGTTAAGTGGAACTGCTGCTTTAGAGTTTGT
 TGGAAGGTCCGGGTGACTCATCCCAACATTTACATCCTTAATTGTTAAAGCGCTG
 CCTCCGAGCGCACGCATCCTGAGATCCTGAGCCTTTGGTTAAGACCGAGCTCTAT
 40 TAAGCTGAAAAGATAAAAACTCTCCAGATGTCTTCCAGTAATGTCGAAGTTTTTA
 TCCCAGTGTCAAGGAAACACCAATGGCTTCCCCGCGACAGCTTCCAATGACCT
 GAAGGCATTTACTGAAGGAGCTGTGTTAAGTTTTTATAACATCTGCTATCGAGTA
 AAACTGAAGAGTGGCTTTCTACCTTGTGCGAAAACAGTTGAGAAAGAAATATTAT
 CGAATATCAATGGGATCATGAAACCTGGTCTCAACGCCATCCTGGGACCCACAG
 45 GTGGAGGCAAATCTTCGTTATTAGATGTCTTAGCTGCAAGGAAAGATCCAAGTGG
 ATTATCTGGAGATGTTCTGATAAATGGAGCACC GCGACCTGCCAATTTCAAATGT
 AATTCAGGTTACGTGGTACAAGATGATGTTGTGATGGGCACTCTGACGGTGAGA
 GAAAACCTTACAGTTCTCAGCAGCTCTTCGGCTTGCAACAACTATGACGAATCATG
 AAAAAACGAACGGATTAACAGGGTCATTCAAGAGTTAGGTCTGGATAAAGTGG

CAGACTCCAAGGTTGGAAGCTCAGTTTATCCGTGGTGTGTCTGGAGGAGAAAGAA
 AAAGGACTAGTATAGGAATGGAGCTTATCACTGATCCTTCCATCTTGTCTTGGAG
 TGAGCCTACAAGTGGCTTAGACTCAAGCACAGCAAATGCTGTCCTTTTGCTCCTG
 AAAAGGATGTCTAAGCAGGGACGAACAATCATCTTCTCCATTCATCAGCCTCGAT
 5 ATTCCATCTTCAAGTTGTTTGATAGCCTCACCTTATTGGCCTCAGGAAGACTTATG
 TTCCACGGGCCTGCTCAGGAGGCCTTGGGATACTTTGAATCAGCTGGTTATCACT
 GTGAGGCCTATAATAACCCTGCAGACTTCTTCTTGGACATCATTAAATGGAGATTC
 CACTGCTGTGGCATTAAACAGAGAAGAAGACTTTAAAGCCACAGAGATCATAGA
 GCCTTCCAAGCAGGATAAGCCACTCATAGAAAAATTAGCGGAGATTTATGTCAA
 10 CTCCTCCTTCTACAAAGAGACAAAAGCTGAATTACATCAACTTTCCGGGGGTGAG
 AAGAAGAAGAAGATCACAGTCTTCAAGGAGATCAGCTACACCACCTCCTTCTGT
 CATCAACTCAGATGGGTTTCCAAGCGTTCATTCAAAAAGTTGCTGGGTAATCCCC
 AGGCCTCTATAGCTCAGATCATTGTACAGTCGTAAGTGGGACTGGTTATAGGTGC
 CATTTACTTTGGGCTAAAAAATGATTCTACTGGAATCCAGAACAGAGCTGGGGTT
 15 CTCTTCTTCTGACGACCAACCAGTGTTCAGCAGTGTTCAGCCGTGGAAGTCTT
 TGTGGTAGAGAAGAAGCTCTTCATACATGAATACATCAGCGGATACTACAGAGT
 GTCATCTTATTTCTTGGAAAAGTGTATCTGATTTATTACCCATGAGGATGTTAC
 CAAGTATTATATTACCTGTATAGTGTACTTCATGTTAGGATTGAAGCCAAAGGC
 AGATGCCTTCTTCGTTATGATGTTTACCCTTATGATGGTGGCTTATTCAGCCAGTT
 20 CCATGGCACTGGCCATAGCAGCAGGTGAGAGTGTGGTTTCTGTAGCAACACTTCT
 CATGACCATCTGTTTTGTGTTTATGATGATTTTTTTCAGGTCTGTTGGTCAATCTCA
 GAACCATTCATCTTGGCTGTGATGGCTTCAGTACTTCAGCATTCCACGATATGG
 ATTACGGCTTTGCAGCATAATGAATTTTGGGACAAAAGTCTGCCCAGGACTC
 AATGCAACAGGAAACAATCCTTGTAAGTATGGAACATGTACTGGCGAAGAATAT
 25 TTGGTAAAGCAGGGCATCGATCTCTCACCCCTGGGGCTTGTGGAAGAATCACGTGG
 CCTTGGCTTGTATGATTGTTATTTTCTCACAAATTGCCTACCTGAAATTGTTATTTT
 TAAAAAATATTCTTAAATTTCCCTTAATTCAGTATGATTTATCCTCACATAAAA
 AAGAAGCACTTTGATTGAAGTATTCAATCAAGTTTTTTTGTGTTTCTGTTCCCT
 TGCCATCACACTGTTGCACAGCAGCAATTGTTTTAAAGAGATACATTTTATAGAAA
 30 TCACAACAACTGAATTAAACATGAAAGAACCAAGACATCATGTATCGCATAT
 TAGTTAATCTCCTCAGACAGTAACCATGGGGAAGAAATCTGGTCTAATTTATTAA
 TCTAAAAAAGGAGAATTGAATTCTGGAAACTCCTGACAAGTTATTACTGTCTCTG
 GCATTTGTTTCCTCATCTTTAAATGAATAGGTAGGTAGTAGCCCTTCAGTCTTA
 ATACTTTATGATGCTATGGTTTGCCATTATTTAATAAATGACAAATGTATTAATGC
 35 TATACTGGAAATGTAAAATTGAAAATATGTTGGAAAAAAGATTCTGTCTTATAGG
 GTAAAAAAGCCACCGTGATAGAAAA

SEQ ID NO: 640

>21416 BLOOD 094071.9 M87068 g179896 Human CaN19 mRNA sequence. 0

40 CTCCCACTTCCCCTGTGGCCTGGGTGGGCTCAGGGGCTGCCCTTGACCTGGCCT
 AGAGCCCTCCCCAGCTGGTGGTGGAGCTGGCACTCTCTGGGAGGGAGGGGGCT
 GGGAGGGAATGAGTGGGAATGGCAAGAGGCCAGGGTTTGGTGGGATCAGGTTG
 AGGCAGGTTTGGTTTCTTAAATGCCAAGTTGGGGGCCAGTGGGGCCACATAT
 AAATCCTCACCTGGGAGCCTGGCTGCCTTGCTCTCCTTCTGGGTCTGTCTCTGC
 45 CACCTGGTCTGCCACAGATCCATGATGTGCAGTTCTCTGGAGCAGGCGCTGGGCT
 GTGCTGGTCACTACCTTCCACAAGTACTCCTGCCAAGAGGGCGACAAGTTCAAGC
 TGAGTAAGGGGGAAATGAAGGAAGTTCTGCACAAGGAGCTGCCCAGCTTTGTGG
 GGGAGAAAGTGGATGAGGAGGGGCTGAAGAAGCTGATGGGCAGCCTGGATGAG
 AACAGTGACCAGCAGGTGGACTTCCAGGAGTATGCTGTTTTCTGGCACTCATCA

CTGTCATGTGCAATGACTTCTTCCAGGGCTGCCCAGACCGACCCTGAAGCAGAAC
TCTTGACTTCCTGCCATGGATCTCTTGGGCCCAGGACTGTTGATGCCTTTGAGTTT
TGTATTCAATAAACTTTTTTTGTCTGTTGATAATATTTTAATTGCTCAGTGATGTTT
CATAACCCGGCTGGCTCAGCTGGAGTGCTGGGAGATGAGGGCCTCCTGGATCCT
5 GCTCCCTTCTGGGCTCTGACTCTCCTGGAAATCTCTCCAAGGCCAGAGCTATGCTT
TAGGTCTCAATTTTGAATTTCAAACACCAGCAAAAAATTGGAAATCGAGATAG
GTTGCTGACTTTTATTTTGTCAAATAAAGATATT

SEQ ID NO: 641

10 >21419 BLOOD 406378.10 M29696 g186365 Human interleukin-7 receptor (IL-7) mRNA,
complete cds. 0

CAGGGCTGGCTTTTTTTTTTTAATAAGATAGCTGGTGCCCAAGATTGTTTTCCAC
CTTAAGGATAAAACCTGTAAAGAAAGCCTGAACAATTACAAAAAAGGAAGAAAA
GGAGACTTGGCCAAGTGGTGTCAGGAGTCTTAACAAGGTCATAGTTTGCCAGCCC
15 CTGCCCTAAACAAATAATTCTTGAATGCCTACTGTGGTGTGTAAGATATGAGTAA
ATACCAGGGATACACAGAGAACAAAAGAGAAAACTGCTATTCTTGTGAACTT
GGAAGTTGGAGGAGACTTGGGAAGATGCAGAACTGGATGACTACTCATTCTCATG
CTATAGCCAGTTGGAAGTGAATGGATCGCAGCACTCACTGACCTGTGCTTTTGAG
GACCCAGATGTCAACACCACCAATCTGGAATTTGAAATATGTGGGGCCCTCGTGG
20 AGGTAAAGTGCCTGAATTTTCAAGAACTACAAGAGATATATTTTCATCGAGACAA
AGAAATTCTTACTGATTGGAAAGAGCAATATATGTGTGAAGGTTGGAGAAAAAG
GTCTAACCTGCAAAAAAATAGACCTAACCACTATAGTTAAACCTGAGGGCTCCTTT
TGACCTGAGTGTCTATCTCGGGAAGGAGCAATGACTTTGTGGTGACATTTAAT
ACATCACACTTGCAAAAGAGTATGTAAAAGTTTAAATGCATGATGTAGCTTACC
25 GCCAGGAAAAGGATGAAAACAAATGGAAGCATGTGAATTTATCCAGCACAAAGC
TGACACTCCTGCAGAGAAAGCTCCAACCGGCAGCAATGTATGAGATTAAAGTTC
GATCCATCCCTGATCACTATTTTAAAGGCTTCTGGAGTGAATGGAGTCCAAGTTA
TTACTTCAGAACTCCAGAGATCAATAATAGCTCAGGGGAGATGGATCCTATCTTA
CTAACCATCAGCATTTTGTAGTTTTTCTCTGTCGCTCTGTTGGTCATCTTGGCCTGT
30 GTGTTATGGAaaaaaAGGATTAAGCCTATCGTATGGCCCAGTCTCCCCGATCATA
AGAAGACTCTGGAACATCTTTGTAAGAAACCAAGAAAAAATTTAAATGTGAGTT
TCAATCCTGAAAGTTTCTGGAAGTCCAGATTTCATAGGGTGGATGACATTCAAGC
TAGAGATGAAGTGAAGGTTTTCTGCAAGATACGTTTCCTCAGCAACTAGAAGA
ATCTGAGAAGCAGAGGCTTGGAGGGGATGTGCAGAGCCCCAACTGCCCATCTGA
35 GGATGTAGTCATCACTCCAGAAAGCTTTGGAAGAGATTTCATCCCTCACATGCCTG
GCTGGGAATGTCAGTGCATGTGACGCCCTATTCTCTCCTCTTCCAGGTCCCTAG
ACTGCAGGGAGAGTGGCAAGAATGGGCCTCATGTGTACCAGGACCTCCTGCTTA
GCCTTGGGACTACAAACAGCACGCTGCCCCCTCCATTTTCTCTCCAATCTGGAAT
CCTGACATTGAACCCAGTTGCTCAGGGTCAAGCCATTCTTACTTCCCTGGGATCA
40 AATCAAGAAGAAGCATATGTCAACATGTCCAGCTTCTACCAAAACCAGTGAAGT
GTAAGAAACCCAGACTGAACCTACCGTGAGCGACAAAGATGATTTAAAAGGGAA
GTCTAGAGTTCCTAGTCTCCCTCACAGCACAGAGAAGACAAAATTAGCAAAACC
CCACTACACAGTCTGCAAGATTCTGAAACATTGCTTTGACCACTCTTCTGAGTTC
AGTGGCACTCAACATGAGTCAAGAGCATCCTGCTTCTACCATGTGGATTGTTGTC
45 CAAGGTTTAAGGTGACCCAATGATTTCAGCTATTTAAAAAAGAGAGAAAGAA
TGAAAGAGTAAAGGAAATGATTGAGGAGTGAGGAAGGCAGGAAGAGAGCATGA
GAGGAAAGACAGACAGGAAAAATAAAAAATGATAGTTGCCATTATTAGGATTTAA
TATATATCCAGTGCTTTGCAAGTGCTCTGCGCACCTTGTCTCACTCCATCCTGACA
ATAATCCTGGGAGGTGTGTGCAATTACTACGACTACTCTTTTTTATAGATCATT

AAATTCAGAACTAAGGAGTTAAGTAACTTGTCCAAGTTGTTACACAGTGAAGG
GAGGGGCCAAGATATGATGGCTGGGAGTCTAATTGCAGTTCCCTGAGCCATGTG
CCTTTCTCTTCACTGAGGACTGCCCCATTCTTGAGTGCCAAACGTCAGTAACTAGTAAC
AGGGTGTGCCTAGATAATTTATGATCCAACTGAGTCAGTTTGGAAAGTGAAAG
5 GGAACTTACATATAATCCCTCCGGGACAATGAGCAAAAAGTGGACTGTCCCC
AGACAAATGTGAACATACATATCATCACTTAAATTAAAATGGCTATGAGAAAGA
AAGAGGGGGAGAAACAGTCTTGCGGGTGTGAAGTCCCATGACCAGCCATGTCAA
AAGAAGGTAAAGAAGTCAAGAAAAAGCCATGAAGCCCATTGATTTTCAATTTTCT
GAAAATAGGCTCAAGAGGGAATAAATTAGAACTCACAATTTCTCTTGTTTGTTA
10 CCAAGACAGTGATTCTCTTGCTGCTACCACTCACTGCATCCGTCCATGATCTCA
GAGGAACTGTGCTGACCTGGACATGGGTACGTTTGACGAGTGAGAGGAGGC
ATGACCCCTCCCATGTGTATAGACACTACCCCAACCTAAATTCATCCCTAAATTG
TCCCAAGTTCTCCAGCAATAGAGGCTGCCACAACTTCAGGGAGAAAGAGTTAC
AAGTACATGCAATGAGTGAAGTGAAGTGTGGCTACATTCTTGAAGATATACGGAA
15 GAGACGTATTATTAATGCTTGACATATATCATCTTGCCTTTCTTGGTCTAGACTGA
CTTCTAATGACTAACTCAAAGTCAAGGCACTGAGTAATGTCAGCTCAGCAAAGT
GCAGCAAACCCATCTCCACAGGCCTCCAAACCCTGGCTGTTACAGAACCACA
AAGGGCAGATGCTGCACAGAAAAGTGAAGAGGGGTCATAGGTTTCAATGGTTTTG
TTTGAGATTTGTTGCTACTGTTTTTCTGTTTTGAATTTTCTTCTTTGTTCTGTTTTA
20 CTTTATTTAGGGGGACTAGGTGTTTCTGATATTTAGTTTTCTTGTGTTTGTGTTT
TGTGTTGTCTGTGAATGGGGTTTTAACTGTGGATGAATGGACCTTATCTGTTGGCT
TAAAGGACTGGTAAATCAGACCATCTTATTTCTTCAAGTGAATGTTTTACTTTCC
AAAGTGCTCTCCTCTGCACAGCAGTAATAAATACAATGCCATAATCCCTTAGGT
TTGCCTAGTGCTTTTGCAATTTTCAAAGCACTTCCATAAGCATTCCCTTCCACCTCC
25 TTGATAGGCATTTATGGAAAGCCTGCTACATGTCAATCATACTGTTAGGCACAGG
GGACCTAAAGACACATAAAAGGATGGCATTCTGCCTCATAAATTGCAAAACCTA
ATGAAAGTGACTGCTTGGTAAACAAATTATTATTATATTATAAAATGCTATAAAA
GAGCCATATTGAAAGTGCCCTGTTGGAGACAGGGCAAATGCCACAAAAATGATG
TAAATTTACATGGAGGAAAAGTAGAATCTGCCTGGTTTGTAGGCAGCAGAAGAC
30 ATTTTTCATCAGTGGGCAGGTGTTCTTTACCTTTTGTAGAAATGGGAGTCAAGTCT
CAAATAGGAGGCTCCACAAAATCTCATGCCAGGTCTCTGATACCTTATTCACAGA
AGTTCTTTGAAGTATTTATTGTTATTTTCTTTGACTTATGGGAAAAGTGGGACACA
GGAAGACAGGTAAATTACCCAACCTCACACGTTAAGTCAGAACTGGGAGCCATA
ATTTTGTATCCCTGGTATAAATAGACAATCTCTCGAAGAAATGAAGAGATGACCA
35 TAGAAAAACATCGAGATATCTCCAGCTCTAAAATCCTTTGTTTCAATGTTGTTTG
GCATATGTTATCTTTGGAATTTAGTGTCTGAGCCTCTGTCTGTTACTGTAGTATTT
AAAATGCATGTATTATAATCATATAATCATAACTGCTGTTAATTCTTGATTATATA
CCTAGGGACAATGTGTAATGTAAGATTACTAATTGGTTCTGCCCAATCTCCTTTC
AGATTTTATTAGGAAAAAAAATAAACCTCCTGATCGGAGACAATGTATTAATC
40 AGAAGTGTAAGTGGCAGTTCTATATAGCATGAAATGAAAAGACAGCTAATTTG
GTCCAACAAACATGACTGGGTCTAGGGCACCCAGGCTGATTCAGCTGATTTCCCTA
CCAGCCTTTGCCTCTTCCTTCAATGTGGTTTCCATGGGAATTTGCTTCAGAAAAGC
CAAGTATGGGCTGTTTCAGAGGTGCACACCTGCATTTTCTTAGCTCTTCTAGAGGG
GCTAAGAGACTTGGTACGGGCCAGGAAGAATATGTGGCAGAGCTCCTGGAAATG
45 ATGCAGATTAGGTGGCATTGTTGTCAGCTCTGTGGTTTATTGTTGGGACTATTCTT
TAAAATATCCATTGTTCACTACAGTGAAGATCTCTGATTTAACCGTGTACTATCC
ACATGCATTACAAACATTTTCGAGAGCTGCTTAGTATATAAGCGTACAATGTATG
TAATAACCATCTCATATTTAATTAATGGTATAGAAGACAA

SEQ ID NO: 642

>21422 BLOOD 354768.27 M18981 g179767 Human prolactin receptor-associated protein (PRA) gene, complete cds. 0

5 CCGAGCTGGCCTCCGGGGCACCGACCGCTATAAAGGCCAGTCGGACTGCGACAC
AGCCCATCCCCTCGACCGCTCGCGTCGCATTTGGCCGCCTCCCTACCGCTCCAAG
CCCAGCCCTCAGCCATGGCATGCCCCCTGGATCAGGCCATTGGCCTCCTCGTGGC
CATCTTCCACAAGTACTCCGGCAGGGAGGGTGACAAGCACACCCTGAGCAAGAA
GGAGCTGAAGGAGCTGATCCAGAAGGAGCTCACCATTGGCTCGAAGCTGCAGGA
TGCTGAAATTGCAAGGCTGATGGAAGACTTGGACCGGAACAAGGACCAGGAGGT
10 GAACTTCCAGGAGTATGTCACCTTCTGGGGGCCTTGGCTTTGATCTACAATGAA
GCCCTCAAGGGCTGAAAATAAATAGGGAAGATGGAGACACCCTCTGGGGGTCCT
CTCTGAGTCAAATCCAGTGGTGGGTTATTGTACAATAACCCACCCTGGATTTGA
CTCAGAGAGGACCCCCAGAGGGTGTCTCCATCTTCCCTATTTATTTTCAGCCCTTG
AGGGCTTCATTGTAGATCAAAGCCAAGGCCCCAGGAAGGTGACATACTCCTGG
15 AAGTTCACCTCCTGGTCCTTGTTCCGGTCCAAGTCTTCCATCAGCCTTGCAATTC
AGCATCCTGCAGCTTCGAGCCAATGGTGAGCTCCTTCTGGATCAGCTCCTTCAGC
TCCTTCTTGCTCAGGGTGTGCTTGTACCCTCCCTGCCGGAGTACTTGTGGAAGAT
GGCCACGAGGAGGCCAATGGCCTGATCCAGGGGGCATGCCATGGCTGAGGGCTG
GGCTTGGAGCTGGCACAGCACTGCTGCTCCTGACTATCCCTCCAGCGGGGGAGCG
20 CCACAGATGGCCCCAGTCTGGATCCAGCGGCTGAACTGGGCAGGGGATGGCTGG
ACCCCCAGCGTGAGGGCAGCTGGCCCTGGAAAGTACCCAGGGCTCCTGGAGAGA
ACTCACCGGTAGGGAGGGCGGCCAATGCGACGCGAGC

SEQ ID NO: 643

25 >21425 BLOOD 286742.1 AF105201 g4336773 Human G-protein alpha subunit 14
(Galpha14) mRNA, complete cds. 0

GGACGCGCGCCGTGAGCTTAAGCTGCTGCTGCTGGGAACTGGTGAAAGTGGGAA
AAGCACCTTTATCAAGCAGATGNGAATTATCCATGGGTCTGGTTACAGCGACGA
AGACAGAAAGGGGTTACGAAGCTGGTTTACCAAAACATATTCACCGCCATGCA
30 AGCCATGATCAGAGCGATGGACACGCTAAGGATACAGTATGTGTGTGAACAGAA
TAAGGAAAATGCCCAGATAATCAGAGAAGTGGAAGTGGACAAGGTCTCCATGCT
CTCCAGGGAGCAGGTGGAGGCCATCAAGCAGCTCTGGCAAGATCCAGGCATCCA
GGAGTGTTACGACAGGAGGAGGGAGTACCAGCTGTCGGACTCTGCCAAATATTA
CCTGACTGACATTGACCGCATCGCCACACCATCATTCGTGCCTACCCAACAAGAT
35 GTGCTTCGCGTCCGAGTGCCCAACACCGGCATCATTGAGTATCCATTTGACTTGG
AAAACATCATCTTTCGGATGGTGGATGTTGGTGGCCAACGATCGGAAAGACGGA
AGTGGATTCACTGCTTTGAGAGTGTACCTCCATTATTTTCTTGGTTGCTCTGAGT
GAATATGACCAGGTCTGGCTGAGTGTGACAACGAGAATCGCATGGAAGAGAGC
AAAGCCTTATTTAAAACCATCATCACCTACCCCTGGTTTCTGAATTCATCTGTGAT
40 TTTATTCTTGAACAAGAAGGATCTTTTGGAAAGAGAAAATCATGTACTCTCATCTA
ATTAGCTATTTCCCAAGATACACAGGACCGAAACAGGATGTCAGAGCTGCCAGA
GACTTTATCCTGAAGCTTTACCAAGATCAGAATCCTGACAAAGAGAAAGTCATCT
ACTCTCACTTCACATGTGCTACAGATACAGACAATATTCGCTTTGTGTTTGCTGCT
GTCAAAGACACAATTCTACAGCTAAACCTAAGGGAATTCAACCTTGTCTAAAAG
45 CTGCTGCCCCTCCTCCCCTATAACAGAAGATGTGATTTGCAAACCTCCTTGTTTAA
TTTGCAAGTGCTTCTGACATCACCAGAGCCAGCCCCATGCCAGGAAGTAAGGATG
TCATGTAGATCGTGGGGACAGAGATGGGTGATGGAAGTGGAAAGATATTTGAGT
TTACCAACATACTTTAAAAGTCCTTACATCCCAAATTGTGTTTATAATTATTTTCT
TGACTTTTGGCTATAAGATTTTGTGTAATTTTGAATTTGGTGTTTCTAGAATTTT

TAAAAGCCACTTTGATTTAGTTTTAAATATGTTTAAAAATAGCGATTAAAATTAT
GTAAGCAAGGAGCCTGTTAGTTTATAGATCATGCCTTCAAACCTCTAGAGTTAAT
TTGGGTGACTTTTTTAAAAATAAGAATGTTAATGGGTTTGAAGCTTTTTATTAAAC
CTTGTAATTTAGAGACATTTTTTAATTGTGTTTCTCACCTCATGCTGAAGGGTGACT
5 CCTTTAACATGCCACCAAAGATTTTTTTTAAACACTTGGTTCTTTTTGTGTGTAA
CTTTCTAAGCCAAATTAATGGATATATAAGTATATCTAATTTAGCTTTGCCACAGT
TTGATCACCAAGAAGCCAAAGCTGACATAGAGTAAATGGGCTCTAGATAGCATA
TATGTTTTATTGGTGAAAAANNGNTGTGGTGTGCNCCGTGTGTTGTGTGTGTACA
TTTTTACCCCAATGTATATGACCAGATCTTAAAAATGTATGAAATGGCTAGAAG
10 TCCACATTGTTTGACAAATGTTACGTAACCCTGCCAAAGTTCTGATGGCCACCAC
AGATTTGCTGTTTGAATTATGTATGCTGTGCCTTTCTGAGGAGGCTAAGAATATA
CCATTCTGCTATTAAAAAAGG

SEQ ID NO: 644

15 >21427 BLOOD 337355.1 AL050214 g4884452 Human mRNA; cDNA DKFZp586H2123
(from clone DKFZp586H2123); partial cds. 0
GGGAGAGCCTGGCGAGCTGAAACCCGAGCTCCCGCTCAGCTGGGGCTCGGGGAG
GTCCCTGTAAAACCCGCCTGCCCCCGCCTCCCTGGGTCCCTCCTCTCCCTCCCA
GTAGACGCTCGGGCACCAGCCGCGGAAGGATGGAGCTGGGTTGCTGGACGCAG
20 TTGGGGCTCACTTTTCTTCAGCTCCTTCTCATCTCGTCCTTGCCAAGAGAGTACAC
AGTCATTAATGAAGCCTGCCCTGGAGCAGAGTGGAATATCATGTGTCTGGGAGTG
CTGTGAATATGATCAGATTGAGTGCCTCTGCCCCGGAAGAGGGGAAGTCTGTGG
TTATACCATCCCTTGCTGCAGGAATGAGGAGAATGAGTGTGACTCCTGCCTGATC
EACCCAGGTTGTACCATCTTTGAAAACCTGCAAGAGCTGCCGAAATGGCTCATGGG
25 GGGGTACCTTGGATGACTTCTATGTGAAGGGGTTCTACTGTGCAGAGTGCCGAGC
AGGCTGGTACGGAGGAGACTGCATGCGATGTGGCCAGGTTCTGCGAGCCCCAAA
GGGTCAGATTTTGTGGAAAGCTATCCCCTAAATGCTCACTGTGAATGGACCATT
CATGCTAAACCTGGGTTTGTCTATCCAATAAGATTTGTCATGTTGAGCCTGGAGT
TTGACTACATGTGCCAGTATGACTATGTTGAGGTTCTGTATGGAGACAACCGCGA
30 TGGCCAGATCATCAAGCGTGTCTGTGGCAACGAGCGGCCAGCTCCTATCCAGAG
CATAGGATCCTCACTCCACGTCCTCTTCCACTCCGATGGCTCCAAGAATTTTGAC
GGTTTCCATGCCATTTATGAGGAGATCACAGCATGCTCCTCATCCCCTTGTTTCCA
TGACGGCACGTGCGTCCTTGACAAGGCTGGATCTTACAAGTGTGCCTGCTTGGCA
GGCTATACTGGGCAGCGCTGTGAAAATCTCCTTGAAGAAAGAACTGCTCAGAC
35 CCTGGGGGGCCAGTCAATGGGTACCAGAAAATAACAGGGGGGCCCTGGGCTTATC
AACGGACGCCATGCTAAAATTGGCACCGTGGTGTCTTTCTTTTGTAACTCCT
ATGTTCTTAGTGGCAATGAGAAAAGAACTTGCCAGCAGAATGGAGAGTGGTCAG
GGAAACAGCCCATCTGCATAAAAGCCTGCCGAGAACCAAAGATTTTCAGACCTGG
TGAGAAGGAGAGTTCTTCCGATGCAGGTTCAAGGAGACACCATTACACC
40 AGCTATACTCAGCGGCCTTCAGCAAGCAGAACTGCAGAGTGCCCTACCAAGA
AGCCAGCCCTTCCCTTTGGAGATCTGCCCATGGGATACCAACATCTGCATACCCA
GCTCCAGTATGAGTGCATCTCACCTTCTACCGCCGGCCTGGGCAGCAGCAGGAG
GACATGTCTGAGGACTGGGAAGTGGAGTGGGCGGGCACCATCCTGCATCCCTAT
CTGCGGGAAAATTGAGAACATCACTGCTCCAAAGACCCAAGGGTTGCGCTGGCC
45 GTGGCAGGCAGCCATCTACAGGAGGACCAGCGGGGTGCATGACGGCAGCCTACA
CAAGGGAGCGTGGTTCCTAGTCTGCAGCGGTGCCCTGGTGAATGAGCGCACTGT
GGTGGTGGCTGCCCACTGTGTTACTGACCTGGGGAAGGTCACCATGATCAAGAC
AGCAGACCTGAAAGTTGTTTTGGGGAAATTCTACCGGGATGATGACCGGGATGA
GAAGACCATCCAGAGCCTACAGATTTCTGCTATCATTCTGCATCCCAACTATGAC

CCCATCCTGCTTGATGCTGACATCGCCATCCTGAAGCTCCTAGACAAGGCCCGTA
TCAGCACCCGAGTCCAGCCCATCTGCCTCGCTGCCAGTCGGGATCTCAGCACTTC
CTTCCAGGAGTCCCACATCACTGTGGCTGGCTGGAATGTCCTGGCAGACGTGAGG
AGCCCTGGCTTCAAGAACGACACACTGCGCTCTGGGGTGGTCAGTGTGGTGGACT
5 CGCTGCTGTGTGAGGAGCAGCATGAGGACCATGGCATCCCAGTGAGTGTCACTG
ATAACATGTTCTGTGCCAGCTGGGAACCCACTGCCCCCTTCTGATATCTGCACTGC
AGAGACAGGAGGCATCGCGGCTGTGTCCTTCCCGGGACGAGCATCTCCTGAGCC
ACGCTGGCATCTGATGGGACTGGTCAGCTGGAGCTATGATAAAACATGCAGCCA
CAGGCTCTCCACTGCCTTCACCAAGGTGCTGCCTTTTAAAGACTGGATTGAAAGA
10 AATATGAAATGAACCATGCTCATGCACTCCTTGAGAAGTGTTTCTGTATATCCGT
CTGTACGTGTGTCATTGCGTGAAGCAGTGTGGGCCTGAAGTGTGATTTGGCCTGT
GAACTTGGCTGTGCCAGGGCTTCTGACTTCAGGGACAAAACCTCAGTGAAGGGTG
AGTAGACCTCCATTGCTGGTAGGCTGATGCCGCGTCCACTACTAGGACAGCCAAT
TGGAAGATGCCAGGGCTTGCAAGAAGTAAGTTTCTTCAAAGAAGACCATATACA
15 AAACCTCTCCACTCCACTGACCTGGTGGTCTTCCCCAACTTTCAGTTATACGAATG
CCATCAGCTTGACCAGGGAAGATCTGGGCTTCATGAGGCCCTTTTGAGGCTCTC
AAGTTCTAGAGAGCTGCCTGTGGGACAGCCCAGGGCAGCAGAGCTGGGATGTGG
TGCATGCCTTTGTGTACATGGCCACAGTACAGTCTGGTCCTTTTCCTTCCCCATCT
CTTGTACACATTTTAATAAAATAAGGGTTGGCTTCTGAACTACAAAAAAAAAAAA
20 AAAGG

SEQ ID NO: 645

>21436 BLOOD 348119.3:U40215 g1594276 Human synapsin IIb mRNA, complete cds. 0

CACTGCCGCTGCTGTCTGCGGGGTCTGGCGCGGGGTCTGAGTCTCTGCTGGCTA
25 AGCCGCGCCTCAGCCGCCTCAGTCGCCTCAATCTCGCCTTCCGCCCTCGCTCTCC
CTCCGCGCCACCAGACCCCGTAGCCCCGCGCGCCCCCAGCCCTTTAAGCCAGATG
ATGAACTTCTGCGGCGCCGGCTGTGCGGACAGCAGCTTCATCGCCAACCTGCCCA
ACGGCTACATGACCGACCTGCAGCGGCCCGAGCCCCAGCAGCCGCCGCCGCCGC
CGCCCCCGGTCCGGGCGCCGCCTCGGCCTCGGCGGCGCCCCCGACCGCCTCGCC
30 GGGCCCGGAGCGGAGGCCGCCGCCCGCCTCGGCGCCCGCCGCGCAGCCCGCGCC
GACGCCGTCGGTGGGCAGCAGCTTCTTCAGCTCGCTGTCCCAAGCCGTGAAGCAG
ACGGCCGCCTCGGCTGGCCTGGTGGACGCGCCCGCTCCCGCGCCCGCAGCCGCC
AGGAAGGCCAAGGTGCTGCTGGTGGTGCAGCAGCCGCACGCCGACTGGGCCAAG
TGCTTTTCGGGGCAAAAAAAGTCCTTGAGATTATGATATCAAGGTGGAACAGGC
35 AGAATTTTCAGAGCTCAACCTGGTGGCCCATGCAGATGGCACCTATGCTGTGGAT
ATGCAGGTTCTCCGGAATGGCACAAAGGTTGTCCGGTCCTTCCGGCCAGACTTCG
TGCTCATCCGGCAGCATGCATTTGGCATGGCGGAGAATGAGGACTTCCGCCACCT
GATCATTGGTATGCAGTATGCAGGCCTCCCCAGCATCAACTCACTGGAATCCATA
TACAACTTCTGTGACAAGCCATGGGTGTTTGCCAGCTGGTCGCTATCTATAAGA
40 CACTGGGAGGAGAAAAGTTCCTCTCATTGAACAGACATACTACCCCAACCACA
AAGAGATGCTGACACTGCCCACGTTCCCTGTGGTGGTGAAGATTGGCCACGCTCA
CTCAGGCATGGGCAAGGTCAAAGTGGAACCACTACGACTTCCAGGACATTGC
CAGCGTGGTGGCTCTACCCAGACCTATGCCACTGCAGAGCCTTTCATTGACTCC
AAGTATGACATCCGGGTCCAGAAGATTGGCAACAACCTACAAGGCTTACATGAGG
45 ACATCGATCTCAGGGAACCTGGAAGACGAACACTGGCTCTGCGATGCTGGAGCAG
ATTGCCATGTCAGACAGGTACAACTGTGGGTGGACACCTGCTCTGAGATGTTTG
GCGGCCTGGACATCTGTGCTGTCAAAGCTGTACATGGCAAAGATGGGAAAGACT
ACATTTTTGAGGTCATGGACTGTAGCATGCCACTGATTGGGGAACATCAGGTGGA
GGACAGGCAACTCATCACCGAAGTAGTCATCAGCAAGATGAACCAGCTGCTGTC

CAGGACTCCTGCCCTGTCTCCTCAGAGACCCCTAACAACCCAGCAGCCACAGAGC
GGAACACTTAAGGATCCGGACTCAAGCAAGACCCACCTCAGCGGCCACCCCT
CAAGGTTGTTTACAGTATATTCTCGACTGTAATGGCATTGCAGTAGGGCCAAAAC
AAGTCCAAGCTTCTTAAAATGATTGGTGGTTAATTTTTCAAAGCAGAAATTTTAA
5 GCCAAAAACAAACGAAAGGAAAGCGGGGAGGGGAAAACAGACCCTCCCACTGG
TGCCGTTGCTGCGTTCTTTCAATGCTGACTGGACTGTGTTTTTCTATGCAGTGTC
AGCTCCTCTGTCTGGTTGTTTACCTGTTCTGTTTCGTGCTTGTAATGCTCACTTATG
TTTTCTCTGTATAACTTGTGATTCCAGGGCTGTTTGTCAACAGTATACAAAAGAAT
TGTGCCTCTCCCAAGTCCAGTGTGACTTTATCTTCTGGGTGGTTTGATAGTGTTTT
10 TAAAAGTAATATATAATGTGGGGTGAAATGGGAGTAGGGGGGTGGACAGGGGA
GAAACGAAAACCACAAAAAGAAAACCCAACTCCTCTCCTCCCCCAAGCTCAGT
TAAATCCCCCACCTCCAACCTTCCCTCCACCAGTGTGCTTGGGATCTTCAATGAAC
TGTGCTTTTCGCTTTCTTTCTGCATGACTATTGTAAGTAGATAGAACATTAAGAGA
TTTTCAAGATCAAACCTCCATAGCTTCATCCACTGAATTTGAAGGCATCCACCTTT
15 TTCTCCATTTGCTAAAATTTGGTGCAGTTTGAGTTTATGTGAATAGGCTGGCTGTG
CCTGTAGAGCTCTTGTGTTTTTAGTGATGACATGAAATACAAAGAACAAGCTATT
TCCAGGAATGTGTTCTGTATTTTACATCCCAGTGTACCCTTTATTTTATTATTAAC
TAATTAAGTATGAGATTTTAAAAAATGGGGCCGCTGATGTGCAATATCAAAGTG
AACTTGTGAGTATTTTGTGTGTGTTGATCTCAGTTGTTTCTTCATTGTTGCTGTTTC
20 TGGATCCAGCCATGTGTGCGCTTGTGTGGACCTGAGGCTGCTTTCTGTTCCCAA
GCTTGACCTGTGTACAGAGATAATTCCTTGGCAATGTTGGACATAGAATGCAGGG
AGCTACTGAAGGTCTGTCAGGGATTGTCCATTCTGCTCTTGGCCTCTCCTGAGGC
CTCATAATGGGAGACCAATCAAAAATGTCCCATGTCACTTGAGTGGGTACACTG
CCTACAGAACCTTGAGGTGACTCCTGCTTCAGTTCTCAGCTGTTTACCACAGCCC
25 TCCAGGGTCCAAAGATTGAGGAGCTTCTCTTTCCTGGGAGGAACTGTCTCAGAT
TTAGCTTGTGTGTGTTTTGGACAGAGGCTCCACAGCGGTGGCTCTTGAGGAATCC
TCACCAGTTTGTCTCTTCCCTCTGACAAGCAGCACCTGAGCAGATGCTGAGGCA
GTTCAATTAACCAGGCCTCAGCTTCAGTGCCTCATCTTGCCATCTCCCGGCCAGG
CTGGGAACGGGCACCAAGCAGCCGCCTCTAACAACACCATGGTCCGTGGAAGT
30 TCATGCCAGCAGCTTGCCTTTGAGAAGAAATGCTGCTGGCTCTATTTTACATTCC
CTTCCACCTCTATACTGTCAATGTACCGTTCTGAACTCCCAGATCTGAGAAGGAA
CTAGTGTTGGTGGTATGTAACAAGAGTTACGTATCCAGGGGCTTGTGCCTTGGTT
TCTCCTTTGATTGCTGGTAAATTCTGAGGCCACAGAGAAATGCATTGAGTGTGAA
TGTTGTCATCTGTAATCCCTCCCTCAGCTGATAATGGTAGTTGATCTGTTGTAAAT
35 ATATACATATATGCATATTTGCACTTCCAGATGGGTGTCATAAGAATCAGGTCCCT
TAAATACCTCCCAATCTGATGAAACGATAGAATAAAGTAACATTTCCAGAAATG
GAGGAATACATTATTTTATCGTATATTTTGTCCAAGCGATGAGCTGACGGTGGT
ATTGCTTCTCTGCATGTTATCAGTGTGTACATCTGGTGCTTTTCATGTGTCAATTTGT
GAGCCACAAATGCAAAGTTGCCATTTGAATTCAGTCAGGCTACAGGGTGGTGTG
40 AGTCAAGGTCTTTCAGGTGGGGGAGAAATTGGTTAGGGCTCCCACTGCCAAATG
CAAGCAGATAGCATAACCTGACTGTTATGTGCCCTCAGGCAGCATGCTTAGGGAC
AACTCTGTGGCCTGGGGGACATCTGTGTACAGTATAGGATTGCCATTCAGGTGT
TTTGTACCTATTTCTTTCCTGACGTTGTCCCTTTTTTTGTACTGATCCAATGGGA
GAACCTCAGCCAATGCTGGAAGTATGATTGAAGTACCTCTCTTTTGTGACTCTTG
45 TACAGCTTAATGTGCAATAAAGGAAAAGTTATATCTGTCAAAA

SEQ ID NO: 646

>21463 BLOOD 251776.14 X53002 g33952 Human mRNA for integrin beta-5 subunit. 0

CGGGGGAGTCTCGGCGCTGGGCGCGTTCGGAGCCCAAGTCGCGGCCCGCCGAGCG
GAGCCAGCCCCTCCCCTACCCGGAGCAGCCCGCTGGGTGCCTGTCCCGAGCGGC
GACACACTAGGAGTCCCGGCCCGGCCAGCCAGGCAGCCGCGGTCCCGGGACTCGG
CCGTGAGTGCTGCGGGACGGATGGTGGCGGCGGGGCGCGGGGCCACGGCGGGGCGC
5 CGTGGAGCCGGGCGCCGTGAGCCGGAGCTGCGCGCGGGGCATGCGGCTGCGCCC
CGGCCCCCTCGGCCCCCGGCCCTCGGCCCCCGCGCTCCGGCCCCAGCCCCGGCCGCC
GGCCCCCGCGGAGTGACAGCAGCCGCGCCGCGCTGAGGGAGGCGCCCCACCATG
CCGCGGGGCCCCGGCGCCGCTGTACGCCTGCCTCCTGGGGCTCTGCGCGCTCCTGC
CCCGGCTCGCAGGTCTCAACATATGCACTAGTGGAAGTGCCACCTCATGTGAAGA
10 ATGTCTGCTAATCCACCCAAAATGTGCCTGGTGTCTCAAAGAGGACTTCGGAAGC
CCACGGTCCATCACCTCTCGGTGTGATCTGAGGGCAAACCTTGTCAAAAATGGCT
GTGGAGGTGAGATAGAGAGCCAGCCAGCAGCTTCCATGTCCTGAGGAGCCTGC
CCCTCAGCAGCAAGGGTTCGGGCTCTGCAGGCTGGGACGTCATTCAGATGACAC
CACAGGAGATTGCCGTGAACCTCCGGCCCCGGTGACAAGACCACCTTCCAGCTAC
15 AGGTTTCGCCAGGTGGAGGACTATCCTGTGGACCTGTACTACCTGATGGACCTCTC
CCTGTCCATGAAGGATGACTTGGACAATATCCGGAGCCTGGGCACCAAACCTCGC
GGAGGAGATGAGGAAGCTCACCAGCAACTTCCGGTTGGGATTTGGGTCTTTTGT
GATAAGGACATCTCTCCTTTCTCCTACACGGCACCGAGGTACCAGACCAATCCGT
GCATTGGTTACAAGTTGTTTCCAAATTGCGTCCCCTCCTTTGGGTTCGCCATCTG
20 CTGCCTCTCACAGACAGAGTGGACAGCTTCAATGAGGAAGTTCGGAAACAGAGG
GTGTCCCGGAACCGAGATGCCCTGAGGGGGGCTTTGATGCAGTACTCCAGGCA
GCCGTCTGCAAGGAGAAGATTGGCTGGCGAAAGGATGCACTGCATTTGCTGGTG
TTCACAACAGATGATGTGCCCCACATCGCATTTGGATGGAAAATTGGGAGGCCTG
GTGCAGCCACACGATGGCCAGTGCCACCTGAACGAGGCCAACGAGTACACTGCA
25 TCCAACCAGATGGACTATCCATCCCTTGCTTGCTTGAGAGAAATTGGCAGAGA
ACAACATCAACCTCATCTTTGCAGTGACAAAAAACCAATTATATGCTGTACAAGAA
TTTTACAGCCCTGATACCTGGAACAACGGTGGAGATTTTAGATGGAGACTCCAAA
AATATTATTCAACTGATTATTAATGCATACAATAGTATCCGGTCTAAAGTGGAGT
TGTCAGTCTGGGATCAGCCTGAGGATCTTAATCTCTTCTTTACTGCTACCTGCCAA
30 GATGGGGTATCCTATCCTGGTCAGAGGAAGTGTGAGGGTCTGAAGATTGGGGAC
ACGGCATCTTTTGAAGTATCATTGGAGGGCCGAAGCTGTCCAGCAGACACACG
GAGCATGTGTTTGCCCTGCGGCCGGTGGGATTCCGGGACAGCCTGGAGGTGGGG
GTCACCTACAACCTGCACGTGCGGCTGCAGCGTGGGGCTGGAACCCAACAGCGCC
AGGTGCAACGGGAGCGGGACCTATGTCTGCGGCCTGTGTGAGTGCAGCCCCGGC
35 TACCTGGGCACCAAGGTGCGAGTGCCAGGATGGGGAGAACCAGAGCGTGTACCAG
AACCTGTGCCGGGAGGCAGAGGGCAAGCCACTGTGCAGCGGGCGTGGGGACTGC
AGCTGCAACCAGTGCTCCTGCTTCGAGAGCGAGTTTGGCAAGATCTATGGGCCTT
TCTGTGAGTGCACAACTTCTCCTGTGCCAGGAACAAGGGAGTCCTCTGCTCAGG
CCATGGCGAGTGTCACTGCGGGGAATGCAAGTGCCATGCAGGTTACATCGGGGA
40 CAACTGTAACCTGCTCGACAGACATCAGCACATGCCGGGGCAGAGATGGCCAGAT
CTGCAGCGAGCGTGGGCACTGTCTCTGTGGGCAGTGCCAATGCACGGAGCCGGG
GGCCTTTGGGGAGATGTGTGAGAAGTGCCCCACCTGCCCGGATGCATGCAGCAC
CAAGAGAGATTGCGTCGAGTGCTGCTGCTCCACTCTGGGAAACCTGACAACCA
GACCTGCCACAGCCTATGCAGGGATGAGGTGATCACATGGGTGGACACCATCGT
45 GAAAGATGACCAGGAGGCTGTGCTATGTTTCTACAAAACCGCCAAGGACTGCGT
CATGATGTTACCTATGTGGAGCTCCCCAGTGGGAAGTCCAACCTGACCGTCCTC
AGGGAGCCAGAGTGTGGAAACACCCCCAACGCCATGACCATCCTCCTGGCTGTG
GTCGGTAGCATCCTCCTTGTGGGCTTGCACTCCTGGCTATCTGGAAGCTGCTTGT
CACCATCCACGACCGGAGGGAGTTTGCAAAGTTTCAGAGCGAGCGATCCAGGGC

CCGCTATGAAATGGCTTCAAATCCATTATACAGAAAGCCTATCTCCACGCACACT
 GTGGACTTCACCTTCAACAAGTTCAACAAATCCTACAATGGCACTGTGGACTGAT
 GTTTCCTTCTCCGAGGGGCTGGAGCGGGGATCTGATGAAAAGGTCAGACTGAAA
 CGCCTTGCACGGCTGCTCGGCTTGATCACAGCTCCCTAGGTAGGCACCACAGAGA
 5 AGACCTTCTAGTGAGCCTGGGCCAGGAGCCCACAGTGCCTGTACAGGAAGGTGC
 CTGGCCATGTCACCTGGCTGCTAGGCCAGAGCCATGCCAGGCTGCGTCCCTCCGA
 GCTTGGGATAAAGCAAGGGGACCTTGGGCGCTCTCAGCTTTCCTGCCACATCCA
 GCTTGTGTCCCAATGAAATACTGAGATGCTGGGCTGTCTCTCCCTTCCAGGAAT
 GCTGGGCCCCCAGCCTGGCCAGACAAGAAGACTGTCAGGAAGGGTTCGGAGTCTG
 10 TAAAACCAGCATACAGTTTGGCTTTTTTTCACATTGATCATTTTTATATGAAATAAA
 AAGATCCTGCATTTATGGTGTAGTTCTGAGTCCTGAGACTTTTCTGCGTGATGGCT
 ATGCCTTGCACACAGGTGTTGGTGATGGGGCTGTTGAGATGCCTGTTGAAGGTAC
 ATCGTTTGCAAATGTCAGTTTCCTCTCCTGTCCGTGTTTGTGTTAGTACTTTTATAAT
 GAAAAGAAACAAGATTGTTTGGGATTGGAAGTAAAGATTAAAACCAAAAAGAATT
 15 TGTGTTTGTCTGATACTCTCTGTGTGTTTCTTTCTTTCTGAGCGGACTTAAAATGG
 TGCCCCCAGTGGGGATTGAAGCGGCCGTGTACTTCCTCAGGGATGGGACACAGG
 CTGGTCTGATACTCCAGACTGCAGCTTGTCAAGTAAGCATGAGGTGCTCGGGGCA
 GTGAGGGCTGTGCAAGGGGGAACACTGAGCAGATAGATACCTTTGGCCCCCTTCC
 AGCTTTTACTGACAGAGAGTTCCAGGCTAGACACCATAAAAACCAACCCTTGGTC
 20 TCCCTCCCTTGTCTGAGGGGCTGAGGCTGGAAATAGATTGTACAGACAAGCAAG
 GGTTGAGTGGTGGTTCACACGAAGTCATCTCTTAAACATCATTAGCAATAGCA
 GTTCCCTTCCAAGGCTCCCTCCTCCTCCGAAACACTTACGTCCCATGCAGGCCCT
 AATGCAAAAAAACACATTTGAGCTTTTTTCCCGCAGGGCCATGAAGTCCCTTAA
 GTTCCCATATCTAAGATGGTTGACTGACCCTCTCCCTTATGNANNNNNNNNNNN
 25 NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGTTTGTAGGAGGTAC
 TGAATGACAACTGTTCTAAGACCCCATCTCATGCTGGCCAGAGGGCCAGCCTC
 CTCATTCTGCTTGCTCTTAGAAAATCTTCACTGATCATTTTTTGTCACTGGAAT
 AACTTCAAGGTTATTATGCTTTCATTCCAAATGGATCTGTCCTCAGCTCTGGACCC
 AATTCCCCTTACTTCATTTTGGCAAACACTAAGTCAAATAGTGAAATGCCTGTCA
 30 CTACATAGAACCTATTACCTGGGGCAAATACGAACAGATTGAGTTTCCTTCATCT
 TGTGTAAATATGATGAAACAGAGACCTGGTAACTTGGTGACACTGTAAACCCTT
 TTTGGGATAAAGCCAAATGTAAATGAAAACATTAAACAGATAAATTGTGGCGTT
 GAGACTTTTCTGAATTGAGAAAAATAAATGTAATTTTGAAGAAAAAAGGG
 ANNANNANNGGANNCAAGNNNANNNAAAAAAGGG

SEQ ID NO: 647

>21515 BLOOD 410296.1 AF085690 g4106439 Human multidrug resistance-associated protein 3 (MRP3) mRNA, complete cds. 0

GGGTCCGACCGCGCTCGCCTTCCTTGCAGCCGCGCCTCGGCCCCATGGACGCCCT
 40 GTGCGGTTCCGGGGAGCTCGGCTCCAAGTTCTGGGACTCCAACCTGTCTGTGCAC
 ACAGAAAACCCGGACCTCACTCCCTGCTTCCAGAACTCCCTGCTGGCCTGGGTGC
 CCTGCATCTACCTGTGGGTGCGCCTGCCCTGCTACTTGCTCTACCTGCGGCACCAT
 TGTCGTGGCTACATCATCCTCTCCACCTGTCCAAGCTCAAGATGGTCCTGGGTG
 TCCTGCTGTGGTGCCTCTCCTGGGCGGACCTTTTTTACTCCTTCCATGGCCTGGTC
 45 CATGGCCGGGCCCCCTGCCCTGTTTTCTTTGTCACCCCCTTGGTGGTGGGGGTCAC
 CATGCTGCTGGCCACCCTGCTGATACAGTATGAGCGGCTGCAGGGCGTACAGTCT
 TCGGGGGTCTCATTATCTTCTGGTTCCTGTGTGTGGTCTGCGCCATCGTCCCATT
 CCGCTCCAAGATCCTTTTAGCCAAGGCAGAGGGTGAGATCTCAGACCCCTTCCGC
 TTCACCACCTTCTACATCCACTTTGCCCTGGTACTCTCTGCCCTCATCTTGGCCTG

CTTCAGGGAGAAACCTCCATTTTTCTCCGCAAAGAATGTCGACCCTAACCCCTAC
CCTGAGACCAGCGCTGGCTTTCTCTCCCGCTGTTTTCTGGTGGTTCACAAAGAT
GGCCATCTATGGCTACCGGCATCCCCTGGAGGAGAAGGACCTCTGGTCCCTAAA
GGAAGAGGACAGATCCCAGATGGTGGTGCAGCAGCTGCTGGAGGCATGGAGGA
5 AGCAGGAAAAGCAGACGGCACGACACAAGGCTTCAGCAGCACCTGGGAAAAAT
GCCTCCGGCGAGGACGAGGTGCTGCTGGGTGCCCGGCCAGGCCCGGAAGCCC
TCCTTCCTGAAGGCCCTGCTGGCCACCTTCGGCTCCAGCTTCCTCATCAGTGCCTG
CTTCAAGCTTATCCAGGACCTGCTCTCCTTCATCAATCCACAGCTGCTCAGCATCC
10 TGATCAGGTTTATCTCCAACCCCATGGCCCCCTCCTGGTGGGGCTTCCTGGTGGCT
GGGCTGATGTTCTGTGCTCCATGATGCAGTCGCTGATCTTACAACACTATTACC
ACTACATCTTTGTGACTGGGGTGAAGTTTCGTACTGGGATCATGGGTGTCATCTA
CAGGAAGGCTCTGGTTATCACCAACTCAGTCAAACGTGCGTCCACTGTGGGGGA
AATTGTCAACCTCATGTCAGTGGATGCCCAGCGCTTCATGGACCTTGCCCCCTTC
CTCAATCTGCTGTGGTCAGCACCCCTGCAGATCATCCTGGCGATCTACTTCCTCTG
15 GCAGAACCTAGGTCCCTCTGTCCTGGCTGGAGTCGCTTTCATGGTCTTGCTGATTC
CACTCAACGGAGCTGTGGCCGTGAAGATGCGCGCCTTCCAGGTAAAGCAAATGA
AATTGAAGGACTCGCGCATCAAGCTGATGAGTGAGATCCTGAACGGCATCAAGG
TGCTGAAGCTGTACGCCTGGGAGCCCAGCTTCCTGAAGCAGGTGGAGGGCATCA
GGCAGGGTGAGCTCCAGCTGCTGCGCACGGCGGCCTACCTCCACACCACAACCA
20 CCTTCACCTGGATGTGTCAGCCCCTTCCTGGTGACCCTGATCACCTCTGGGTGTAC
GTGTACGTGGACCCAAACAATGTGCTGGACGCCGAGAAGGCCTTTGTGTCTGTGT
CCTTGTTTAAATATCTTAAGACTTCACACAACATGCTGCCCCAGTTAATCAGCAA
CCTGAGTCAGGCCAGTGTGTCTCTGAAACGGATCCAGCAATTCCTGAGCCAAGAG
GAAGTTGACCCCCAGAGTGTGGAAAGAAAGACCATCTCCCCAGGCTATTCCATC
25 ACATACACAGTGGCACCTTCACCTGGGCCAGGACCTGCCCCCACTCTGCACAG
CCTAGACATCCAGGTCCCGAAAGGGGCACTGGTGGCCGTGGTGGGGCCTGTGGG
CTGTGGGAAGTCTCCCTGGTGTCTGCCCTGCTGGGAGAGATGGAGAAGCTAGA
AGGCAAAGTGCACATGAAGGGCTCCGTGGCCTATGTGCCCCAGCAGGCATGGAT
CCAGAACTGCACTCTTCAGGAAAACGTGCTTTTCGGCAAAGCCCTGAACCCCAAG
30 CGTACCAGCAGACTCTGGAGGCCTGTGCCTTGCTAGCTGACCTGGAGATGCTGC
CTGGTGGGGATCAGACAGAGATTGGAGAGAAGGGCATTAACTGTCTGGGGGCC
AGCGGCAGCGGGTCAGTCTGGCTCGAGCTGTTTACAGTGATGCCGATATTTTCTT
GCTGGATGACCCACTGTCCGCGGTGGACTCTCATGTGGCCAAGCACATCTTTGAC
CACGTCATCGGGCCAGAAGGCGTGCTGGCAGGCAAGACGCGAGTGCTGGTGACG
35 CACGGCATTAGCTTCCTGCCCCAGACAGACTTCATCATTGTGCTAGCTGATGGAC
AGGTGTCTGAGATGGGCCCCGTACCCAGCCCTGCTGCAGCGCAACGGCTCCTTTGC
CAACTTTCTCTGCAACTATGCCCCCGATGAGGACCAAGGGCACCTGGAGGACAG
CTGGACCGCGTTGGAAGGTGCAGAGGATAAGGAGGCACTGCTGATTGAAGACAC
ACTCAGCAACCACACGGATCTGACAGACAATGATCCAGTCACCTATGTGGTCCA
40 GAAGCAGTTTATGAGACAGCTGAGTGCCCTGTCTCAGATGGGGAGGGACAGGG
TCGGCCTGTACCCCGGAGGCACCTGGGTCCATCAGAGAAGGTGCAGGTGACAGA
GGCGAAGGCAGATGGGGCACTGACCCAGGAGGAGAAAGCAGCCATTGGCACTG
TGGAGCTCAGTGTGTTCTGGGATTATGCCAAGGCCGTGGGGCTCTGTACCACGCT
GGCCATCTGTCTCCTGTATGTGGGTCAAAGTGCGGCTGCCATTGGAGCCAATGTG
45 TGGCTCAGTGCCTGGACAAATGATGCCATGGCAGACAGTAGACAGAACAACACT
TCCCTGAGGCTGGGCGTCTATGCTGCTTTAGGAATTCTGCAAGGGTTCTTGGTGA
TGCTGGCAGCCATGGCCATGGCAGCGGGTGGCATCCAGGCTGCCCCGTGTGTTGCA
CCAGGCACTGCTGCACAACAAGATACGCTCGCCACAGTCCTTCTTTGACACCACA
CCATCAGGCCGCATCCTGAACTGCTTCTCCAAGGACATCTATGTCGTTGATGAGG

TTCTGGCCCCTGTCATCCTCATGCTGCTCAATTCCTTCTTCAACGCCATCTCCACT
 CTTGTGGTCATCATGGCCAGCACGCCGCTCTTCACTGTGGTCATCCTGCCCCCTGGC
 TGTGCTCTACACCTTAGTGCAGCGCTTCTATGCAGCCACATCACGGCAACTGAAG
 CGGCTGGAATCAGTCAGCCGCTCACCTATCTACTCCCACCTTTTCGGAGACAGTGA
 5 CTGGTGCCAGTGTTCATCCGGGCTACAACCGCAGCCGGGATTTTGAGATCATCAG
 TGATACTAAGGTGGATGCCAACCAGAGAAGCTGCTACCCCTACATCATCTCCAAC
 CGGTGGCTGAGCATCGGAGTGGAGTTCGTGGGGAACTGCGTGGTGCTCTTTGCTG
 CACTATTTGCCGTTCATCGGGAGGAGCAGCCTGAACCCGGGGCTGGTGGGCCTTTC
 TGTGTCCTACTCCTTGACAGGTGACATTTGCTCTGAACTGGATGATACGAATGATG
 10 TCAGATTTGGAATCTAACATCGTGGCTGTGGAGAGGGTCAAGGAGTACTCCAAG
 ACAGAGACAGAGGCGCCCTGGGTGGTGGAAAGGCAGCCGCCCTCCCGAAGGTTGG
 CCCCCACGTGGGGAGGTGGAGTTCGGAATTATTCTGTGCGCTACCGGCCGGGGCC
 TAGACCTGGTGCTGAGAGACCTGAGTCTGCATGTGCACGGTGGCGAGAAGGTGG
 GGATCGTGGGCCGCACTGGGGCTGGCAAGTCTTCCATGACCCTTTGCCTGTTCCG
 15 CATCCTGGAGGCGGCAAAGGGTGAAATCCGCATTGATGGCCTCAATGTGGCAGA
 CATCGGCCTCCATGACCTGCGCTCTCAGCTGACCATCATCCCGCAGGACCCCATC
 CTGTTCTCGGGGACCCTGCGCATGAACCTGGACCCCTTCGGCAGCTACTCAGAGG
 AGGACATTTGGTGGGCTTTGGAGCTGTCCACCTGCACACGTTTGTGAGCTCCCA
 GCCGGCAGGCCTGGACTTCCAGTGCTCAGAGGGCGGGGAGAATCTCAGCGTGGG
 20 CCAGAGGCAGCTCGTGTGCCTGGCCCGAGCCCTGCTCCGCAAGAGCCGCATCCTG
 GTTTTAGACGAGGCCACAGCTGCCATCGACCTGGAGACTGACAACCTCATCCAG
 GGTACCATCCGCACCCAGTTTGATACTGCACTGTCTGACCATCGCACACCGGC
 TTAACACTATCATGGAATAACACAGGGTGCTGGTCTGGACAAAGGAGTAGTAG
 CTGAATTTGATTCTCCAGCCAACCTCATTGCAGCTAGAGGCATCTTCTACGGGAT
 25 GGCCAGAGATGCTGGACTTGCCTAAAATATATTCCTGAGATTTCTCTCTGGCCTT
 TCCTGGTTTTTCATCAGGAAGGAAATGACACCAAATATGTCCGCAGAAATGGACTTG
 ATAGCAAACACTGGGGGCACCTTAAGATTTTGCACCTGTAAAGTGCTTACAGGG
 TAACTGTGCTGAATGCTTTAGATGAGGAAATGATCCCCAAGTGGTGAATGACAC
 GCCTAAGGTCACAGCTAGTTTGAAGCAGTTAGACTAGTCCCCGGTCTCCCGATTCT
 30 CCAACTGAGTGTTATTTGCACACTGCACTGTTTTCAAATAACGATTTTATGAAAT
 GACCTCTGTCTCTCCCTCTGATTTTTTCATATTTTCTAAAGTTTCGTTTCTGTTTTTA
 ATAAAAAGCTTTTTCTCTCTGGAACAGAAGACAGCTGCTGGGTCAGGCCACCCCT
 AGGAACTCAGTCCTGTACTCTGGGGTGCTGCCTGAATCCATTAAAAATGGGAGTA
 CTGATGAAATAAACTACATGGTCAACAGTATATACACAGTAGTCTTTTGCACCT
 35 TGTTCAACAAGGTTTGGGGATTAGGATCTTTGGAGGAGGCCAAGAGGAAGACTTT
 CTACACATGTACATGGTTGTAGTTACCTGAACTTCAGACCCAAGAGCTCTTGGCT
 GCAAATATTGCCTTCAC

SEQ ID NO: 648

40 >21518 BLOOD 244943.4 AJ001309 g3171907 Human mRNA for DnaJ protein. 0
 GTCTCCCTCGGCCTGTGCCGCCGCCGACGCCGCTTGTGGGCCCCGACTCCGCTCTG
 TCTGCTTCGCCACCTTCTCCCCGAGCACTGCCCGGCCGGCCGCCATGGCTAACGT
 GGCTGACACGAAGCTGTACGACATCCTGGGCGTCCCGCCCGGCGCCAGCGAGAA
 CGAGCTGAAGAAGGCATACAGAAAGTTAGCCAAGGAATATCATCCTGATAAGAA
 45 TCCAAATGCAGGAGACAAATTTAAAGAAATAAGTTTTGCATATGAAGTACTATC
 AAATCCTGAGAAGCGTGAGTTATATGACAGATACGGAGAGCAAGGTCTTCGGGA
 AGGCAGCGGCGGAGGTGGTGGCATGGATGATATTTTCTCTCACATTTTGGTGGG
 GGATTGTTTCGGCTTCATGGGCAATCAGAGTAGAAGTCGAAATGGCAGAAGAAGA
 GGAGAGGACATGATGCATCCACTCAAAGTATCTTTAGAAGATCTGTATAATGGC

AAGACAACCAAACCTACAACCTTAGCAAGAATGTGCTCTGTAGTGCATGCAGTGGC
CAAGGCGGAAAGTCTGGAGCTGTCCAAAAGTGTAGTGCTTGTCGAGGTTCGAGGT
GTGCGCATCATGATCAGACAGCTGGCTCCAGGGATGGTACAACAGATGCAGTCT
GTGTGCTCTGATTGTAATGGAGAAGGAGAGGTAATTAATGAAAAAGACCGCTGT
5 AAAAAATGTGAAGGGAAGAAGGTGATTAAAGAAGTCAAGATTCTTGAAGTCCAC
GTAGACAAAGGCATGAAACATGGACAGAGAATTACATTCCTGGGGAAGCAGAC
CAGGCCCCAGGAGTGGAACCCGGAGACATTGTTCTTTTGCTACAGGAGAAAGAA
CATGAGGTATTTTCAGAGAGATGGGAATGATTTGCACATGACATATAAAATAGGA
CTTGTTGAAGCTCTATGTGGATTTTCAGTTCACATTTAAGCACCTTGATGGACGTCA
10 GATTGTGGTGAAATACCCCCCTGGCAAAGTAATTGAACCAGGGTGTGTTCTGTGTA
GTTTCGAGGTGAAGGGATGCCGCAGTATCGTAATCCCTTTGAAAAAGGTGATCTTT
ACATAAAGTTTGATGTGCAGTTTCCTGAAAACAACCTGGATCAACCCAGACAAGCT
TTCTGAACTAGAAGATCTTCTGCCATCTAGACCGGAAGTTCCTAACATAATTGGA
GAAACAGAGGAGGTAGAGCTTCAGGAATTTGATAGCACTCGAGGCTCAGGAGGT
15 GGTCAGAGGGCGTGAAGCCTATAATGATAGCTCTGATGAAGAAAGCAGCAGCCAT
CATGGACCTGGAGTGCAGTGTGCCCATCAGTAAACTCTGCAAACAAATTGCACA
GGTGGATTTTCTTTCCACATTTGCCTGATTTGTTCTCAGCAATCCAGCTGGAGTGT
CTTATCAATCCAGATGAACTGAGGGACATCTGTTGGTCTATGTATAACTTTTAAA
ATTGGTATAGTATCTACAGAGTGTATAATTTAACTAACCACAAAGCTTTACATC
20 TTCATTTTGACTGTTCCATAGCAGAATAAAGCACTTGAAAGGAAACAAGACTCCC
TTTCACACATGGATTATTATAAGTTTCAATCCTGGTATCTGTGCTTGATTTTATC
AGTTTTGTGTAGATTTTTATGTTTCAATTTTAAATTTAAATCCCACATTGTAAAG
TTTTGTACAATTTGTCTGAAGCTTTGTGTTTGGGTGCACCTGCATAAGCTGCTACA
AATAGAATAAAGAATTTTCATAGCCTGTATCTATCATTTAGATGCATGGAAAAAAA
25 TGGGCTTTGCACACAATGGGTTTGGAGCTGACTGGGAACAATGGAAAAAATTAC
ATTAGCTGTGGTTGTAAAGTTTTTTTGTGTTTTGGTTTTGTTTTTTTTTCTTTTNTCT
TTTTTTTTNTATTACCATCTTGTGAAAGGTTTCTGAAACTCGATAATAAAAAGCG
GTTGGTGTAAATTATTCTTTTGTGTACATTTTTAGAAAGGAAAAACATAAAAGAA
TGTATCCTTAGTACTGGTTCTTAAACAGCCCATAAAAACCCATTGGCCTGAAGCT
30 TATATCTCAGGCCTATGCCCATCTTATAGTCTTGGAAGACAAAAGGCTGGTAGAG
ACAGTCTTCAGTGGCTTCAGTGATGCTCTGTAGAGGCCAGGGTGTCTTGAGTGCT
GTAACCTCCCAAGCACTGGGCTAGCCTGACTTCTGTATCTCCCTACCACCACCCCC
TTAAAAAATAAGGTAACAGCAAATCTATAGTAAAACCATGTCTGCATAGAACG
TGTTCAAATCCTCTGTTTTTCATTAAATGTAAAAGATGCTGTCTCCATTAAGTTGAA
35 TATTTGGAATTGGAGAAGCCATTGATTATTATTTGAGTTTCTGTAATGTTTTATA
GAAAAGTAAGATGCTTATTCAGAATTTAAGAATGAAGGCAACTGAAATATGCAT
TGTTGTAGTTATTTATATTTCAAACATAAAATAAGCAAAAAAAAAAAGGCTGGTTT
GAGAAAAATCAGGTAAAATTGATGAAACGGATGTTGTGTTTCTCTTTCCATCATC
TGGTTTTTACCATTTCACTCAGTAGGTATTTTTAGAACACACTTATTTGAGGAAAG
40 AGACATCAGATGCACAATTTTACATTTATAAAGGAACAAATGGGGAAAACTGAA
AACTAAAAATTTTAAATGTATTAAATGCCATCCCTGAGCCTAAATCTAGTATTTG
TAGTTTATTTCTAGGTCTGCTAGAACCTGAAAACCTGAATGAAAAAAGGTGTGCT
GACACTAATCAAGTCCTGTGAGGTTTAAATTATTGACCTATCCACTCTACCTCCAT
TGTACAAAAAATATTTTACAACAAGCCTGGGTAAGATTCAACAGCATAGTAGTTT
45 TGTATCCAAGGTTACTTCCCCACAACCACTTTAAACATAAGAAATGTGGTGGCAA
TATAAAGTTTGTAGCCTTTCCAATAAAGGTTTATAAAAC

SEQ ID NO: 649

>21530 BLOOD 231654.4 AF056085 g3719225 Human GABA-B receptor mRNA,
complete cds. 0

5 CCGTTCTGAGCCGAGCCGGAACCCTAGCCCGAGACGGAGCCGGGGCCCGGGCCG
GCGCCATTGCGCGGGCGCCGCGGGAAGACCTTGGCGCGGGGCGGGCGGGCCGGGC
CAGGCCATGCGGGCCGAGTGAGCCGGCGCCCGCAGCCCGCGGCGCGGCATGGCT
TCCCCGCGGAGGTCCGGGCAGCCCGGGCCGCGCGCCGCCGCCACC GCCCGCCC
GCGCGCCTGCTACTGCTACTGCTGCTGCCGCTGCTGCTGCCCTCTGGCGCCCGGGG
10 CCTGGGGCTGGGCGCGGGGCGCCCCCGGCCGCCGCCAGCAGCCCGCCGCTCT
CCATCATGGGCCTCATGCCGCTCACCAAGGAGGTGGCCAAGGGCAGCATCGGGC
GCGGTGTGCTCCCCGCCGTGGAAGTGGCCATCGAGCAGATCCGCAACGAGTCAC
TCCTGCGCCCCCTACTTCCTCGACCTGCGGCTCTATGACACGGAGTGCGACAACGC
15 AAAAGGGTTGAAAGCCTTCTACGATGCAATAAAATACGGGCCGAACCACTTGAT
GGTGTGTTGGAGGCGTCTGTCCATCCGTCACATCCATCATTGCAGAGTCCCTCCAA
GGCTGGAATCTGGTGCAGCTTTCTTTTGTGCAACCACGCCTGTTCTAGCCGATA
AGAAAAAATACCCTTATTTCTTTTCGGACCGTCCCATCAGACAATGCGGTGAATCC
AGCCATTCTGAAGTTGCTCAAGCACTACCAGTGGAAGCGCGTGGGCACGCTGAC
GCAAGACGTTTCAGAGGTTCTCTGAGGTGCGGAATGACCTGACTGGAGTTCTGTAT
GGCGAGGACATTGAGATTTTCAGACACCGAGAGCTTCTCCAACGATCCCTGTACCA
20 GTGTCAAAAAGCTGAAGGGGAATGATGTGCGGATCATCCTTGGCCAGTTTGACC
AGAATATGGCAGCAAAAGTGTTCTGTTGTGCATACGAGGAGAACATGTATGGTA
GTAAATATCAGTGGATCATTCCGGGCTGGTACGAGCCTTCTTGGTGGGAGCAGGT
GCACACGGAAGCCAACCTCATCCCGCTGCCTCCGGAAGAATCTGCTTGCTGCCATG
GAGGGCTACATTGGCGTGGAATTCGAGCCCTGAGCTCCAAGCAGATCAAGACC
25 ATCTCAGGAAAGACTCCACAGCAGTATGAGAGAGAGTACAACAACAAGCGGTCA
GGCGTGGGGCCCAGCAAGTTCCACGGGTACGCCTACGATGGCATCTGGGTCATC
GCCAAGACACTGCAGAGGGCCATGGAGACACTGCATGCCAGCAGCCGGCACCAG
CGGATCCAGGACTTCAACTACACGGACCACACGCTGGGCAGGATCATCCTCAAT
GCCATGAACGAGACCAACTTCTTCGGGGTCACGGGTCAAGTTGTATTCCGGAATG
30 GGGAGAGAATGGGGACCATTAAATTTACTCAATTTCAAGACAGCAGGGAGGTGA
AGGTGGGAGAGTACAACGCTGTGGCCGACACACTGGAGATCATCAATGACACCA
TCAGGTTCCAAGGATCCGAACCACCAAAAGACAAGACCATCATCCTGGAGCAGC
TGCGGAAGATCTCCCTACCTCTCTACAGCATCCTCTCTGCCCTCACCATCCTCGGG
ATGATCATGGCCAGTGCTTTTCTTCTTCAACATCAAGAACCGGAATCAGAAGC
35 TCATAAAGATGTGCGAGTCCATACATGAACAACCTTATCATCCTTGGAGGGATGCT
CTCCTATGCTTCCATATTTCTCTTTGGCCTTGATGGATCCTTTGTCTCTGAAAAGA
CCTTTGAAACACTTTGCACCGTCAGGACCTGGATTCTCACCGTGGGCTACACGAC
CGCTTTTGGGGCCATGTTTGCAAAGACCTGGAGAGTCCACGCCATCTTCAAAAAT
GTGAAAATGAAGAAGAAGATCATCAAGGACCAGAACTGCTTGTGATCGTGGGG
40 GGCATGCTGCTGATCGACCTGTGTATCCTGATCTGCTGGCAGGCTGTGGACCCCC
TGCGAAGGACAGTGGAGAAGTACAGCATGGAGCCGGACCCAGCAGGACGGGAT
ATCTCCATCCGCCCTCTCCTGGAGCACTGTGAGAACACCCATATGACCATCTGGC
TTGGCATCGTCTATGCCTACAAGGGACTTCTCATGTTGTTTCGGTTGTTTCTTAGCT
TGGGAGACCCGCAACGTCAGCATCCCCGCACTCAACGACAGCAAGTACATCGGG
45 ATGAGTGTCTACAACGTTGGGGATCATGTGCATCATCGGGGCCGCTGTCTCCTTCC
TGACCCGGGACCAGCCCAATGTGCAGTTCTGCATCGTGGCTCTGGTCATCATCTT
CTGCAGCACCATCACCTCTGCCTGGTATTTCGTGCCGAAGCTCATCACCTGAGA
ACAAACCCAGATGCAGCAACGCAGAACAGGCGATTCCAGTTCCTCAGAATCAG
AAGAAAGAAGATTCTAAAACGTCCACCTCGGTACACAGTGTGAACCAAGCCAGC

ACATCCCGCCTGGAGGGCCTACAGTCAGAAAACCATCGCCTGCGAATGAAGATC
ACAGAGCTGGATAAAGACTTGGAAGAGGTCACCATGCAGCTGCAGGACACACCA
GAAAAGACCACCTACATTAAACAGAACCACTACCAAGAGCTCAATGACATCCTC
AACCTGGGAAACTTCACTGAGAGCACAGATGGAGGAAAGGCCATTTTAAAAAAT
5 CACCTCGATCAAAATCCCCAGCTACAGTGGAACACAACAGAGCCCTCTCGAACA
TGCAAAGATCCTATAGAAGATATAAACTCTCCAGAACACATCCAGCGTCGGCTGT
CCCTCCAGCTCCCCATCCTCCACCACGCCTACCTCCCATCCATCGGAGGCGTGGA
CGCCAGCTGTGTCAGCCCCCTGCGTCAGCCCCACCGCCAGCCCCCGCCACAGACAT
GTGCCACCCTCCTTCCGAGTCATGGTCTCGGGCCTGTAAGGGTGGGAGGCCTGGG
10 CCCGGGGCCTCCCCCGTGACAGAACCACACTGGGCAGAGGGGTCTGCTGCAGAA
AACTGTGCGCTCTGGCTGCGGAGAAGCTGGGCACCATGGCTGGCCTCTCAGGA
CCACTCGGATGGCACTCAGGTGGACAGGACGGGGCAGGGGGAGACTTGGCACCT
GACCTCGAGCCTTATTTGTGAAGTCCTTATTTCTTCACAAAGAAGAGGAACGGAA
ATGGGACGTCTTCCTTAACATCTGCAAACAAGGAGGCGCTGGGATATCAAACCTTG
15 CNNCTAGACAAGGAGAGAGGC
ACTAGAACTCCAGCTGGAAGTCACGGAGTGGCTCGAGCAGCCTTGGGAAGAGGC
AAGGAGCTTCTGAAGAACTGCCTCTGCACACACATCACTGGCTGTGACCCCTCA
GGCTAGCCCTTCTCCACTCTGGGGGAGGAGGTGGGAAGGGCCACCAGGCCCCCA
GCTGCCAGGCCAGCTGACCCCAGCCTTCTTGAACAGGGAGTCTGCAGGAGCGC
20 AGACAGGCACAGCCCTGGAGCAGGCAGGCCGAGGGCTGCGGCACTGGAGCAGG
CTGACTTACATGCTCCACATGGGACCTGTGTCACCCAATGAGATGTTTGTACTCT
GGTAAATGCCACACGTTAACACAATAACACCCATTCTGGGACCGTGGGGATTTA
GGGCACGTCACTGCAGACACGCTCTGCAGCATTCACCGACAGTCTGTGATGCAAC
CACCACGTTGGCCATGTCTTGTGTTCTATCGGATGCTCCCAGTAACCAGGGGG
25 ACCACCCGAGCTAATCATGGAATGTCTGTTCCAGCAAACACGATAAAGAAAGA
TTGTGCACTTTAACCTCTCTCATCAGGGCCCAAGGGCTGGCTGGGANNNNNNNNN
NNNNNNNNNNCCCACTAACTTTGTTTCTGACCAAAGTGAATTGGAGGCACTCTGC
TAAAAGACATCCCCGTAGACATAGGGGAGAGAGTTGCTGGCTGAGGGCTTCCCT
TGGCTTCCAGAAGGCAGCCTTCCATCCAGACAAGCCAGTGAGCTCTCCCCTTGGG
30 ATCACTGGGGTGATCAGTCAGCAGATTGATTCTCATTACATAAGATCATTCTCCC
TTTAAATTGAGCCCCTAAGAGCACTGGCCTGGGAGTCAGACAGACCTGGGTTCA
AGTCCTCAGTCCCCTGCCCACTCCCTACGTGACTTTGATCAGGTCACTAGTGTCTC
TCTGAGCCTCAGTTTCCCCTCTGTAATTGGGGTTGAACTAAAACACCTGTCCTGCC
TACCTACAAGGTCACTCTGAGGATTGAACTTGATCTTGTCCAGGAAAGCTTTG
35 TACCAAACAGTGAAGCCGCCCTGATCCGTGAGGTATGAGTATGACTCTGACCTTC
AGCCCTCCCTACAGCCGGGGGTGTGGCCCAGAGAAGCTTCCAGCACAGCCCTCT
ACCCAGAACATCCGGGCTGGAGGGGAGGCTCCCACTGACTTTTCTGACATTCTAG
ACAGGTTCACTTTTGCTCAAGAAAGGCCTGAATGACAATGTCCAGGATGTCTGC
ACAACCTGAGCAGCTCGCTCACTCCCTAAAGAAACCTATTGGCAGCTTCAACAGGC
40 AGGCAATAATCTCTTCCCAGAACCACTGCAGTCAGGAATAAACTGTTTTCTCCAC
CAGGCTTTGACAAAAGGGCCACAGGAATCTTACCAATGCCAACATTTCAAAGC
ACCCTATTTACGTAGCATAGCTTTCTGCTCCCCTTCCCCAAAGAGAGGTTATGG
AGGTACTGTAGCTTTTAGGGAAAAAAAATGTTAACACATCACAGGTCAAGTTG
AAGTCATTCTCTGTTTAGGCACTAAAAATCGGTGTTGTCACTCACTGTGTATTACC
45 AGTATTTACTTGCTTTCTTGATTTACCAAACCAAATTTAATTTAAAGGACCACA
TTAATTTTCAAAGGGAAAGAGACAATTAATTGTACATAATGTATACACACACAA
AAAAAAAATACCTGTAGAAATATTATTCCAGCATAGCAGGAAAACAAACAAAAG
TATTGGACTGTCGGAGGTGAGCCTGTGCGTCTGTAACCCTTTGTGACTCCTGAGC
GTGCGCTGTCTTCTAGGTTAACTCACGAAGTACATTCTCTGTCTTACTGATACTGT

AGGTTACCCATTTTTTTTAAATTCCTCGCAAATAACAAGACCCACAGAAGTGA
CTCTAGCTACTTAATGGTTCTGTTCTTTTATATGCAGCAAACACACCGTCCATTTC
TGAAGAGGCTTCGGCCTGAAGGCATTTTCCAATGATGTTAGTGCACAAAACGCTT
TAAATTAGACTGGAAGTCCAGAATCAAATGTAAATGAGGAATTTCTCGTACCCC
5 TACTGCATGGTATCGATTTTTTAATAAATTGTTGCAAATTTGTTTTTATGAATAAAA
GGAAAAAACCTGTCG

SEQ ID NO: 650

>21545 BLOOD INCYTE_3384890H1

10 GTGGGCGCGGCTTCCTGCAGCTTGGGCTGGGGATATAGGCGCCCCACACCCGG
GCCCCGCTCAGCGCCGCCGCTCCTCGCCTCCTGCTGCACGATGGCCTCGCT
CCGGGTGGAGCGCGCNGGCGGCCCGNNTCTCCCTAGGACCCGAGTCGGGCGGCC
GGCAGCGCTCCGCNTCCTCCTTNTGCTGGGCGCTGTCNTGAATCCCCACGAGGCC
CTGGCTCAGNNTCTTCCCACCANAGGCA

15 SEQ ID NO: 651

>21551 BLOOD 235484.21 AF135960 g7416899 Human latent transforming growth factor
beta binding protein 3 mRNA, partial cds. 0

20 GCTGCTGCTGGGCTGGGCGGCAGGGTCGAGGGGGGGCCGGCCGGCGAGCGGG
GCGCAGGCGGGGGCGGGGCGCTGGCCCCGCGAGCGCTTCAAGGTGGTCTTTGCGC
CGGTGATCTGCAAGCGGACCTGTCTCAAGGGCCAGTGTGCGGACAGTTGTCAGC
AGGCGCGCGAGCGCTTCAAGGTGGTCTTTGCGCCGGTGATCTGCAAGCGGACCTG
TCTCAAGGGCCAGTGTGCGGACAGTTGTGAGCAGGGCTCCAACATGACGCTCATC
GGAGAGAACGGCCACAGCACAGACAGGCTCACGGGCTCEGGCTTCCGCGTGGTG
25 GTGTGCCCTCTCCCCTGCATGAATGGCGGCCAGTGCTCCTCGCGAAACCAAGTGCC
TGTGTCCCCCGGACTTCACTGGGCGCTTCTGCCAGGTGCCCGCAGGAGGAGCCGG
TGGGGGTACCGGCGGCTCAGGCCCGGCCCTGAGCAGGACAGGGGCCCTGTCCAC
AGGGGCGCTGCCGCCCTGGCTCCGGAGGGCGACTCTGTGGCCAGCAAGCACGC
CATCTACGCCGTCCAGGTGATCGCTGACCCTCCTGGGCCCCGGGGAGGGGCCCTCCT
30 GCCCAGCACGCAGCCTTCCTGGTGCCCTAGGCCCGGGACAGATCTCAGCAGAA
GGTACCAGGCAACTGGCAAACCCGGGAAGGTCGCCAGTGGGTGGGCACTAGGGT
GGCCAGGGCAGGGCAGGTTTCAGCCCTGGAGGAGCTCAGCGCGGTGACCCGCGGC
GCGGTGCGGGCAGCCCTGAGGCCACCGCGCCCCGCCCCAGTGCAAGGCCCGCCC
CCCGTGGTGAATGTGCGCGTCCATCACCCGCCCGAGGCCTCAGTCCAGGTGCACC
35 GCATTGAGAGCTCGAACGCCGAGAGCGCAGCCCCCTCCCAGCACCTGCTGCCGC
ACCCAAGCCCTCGCACCCCCGGCCGCCACCCAGAAGCCCCTGGGCGCGCTGCTT
TCAGGACACTCTGCCCAAGCAGCCGTGTGGCAGCAACCCCCTCCCCGGCCTCACC
AAGCAGGAAGACTGCTGCGGTAGCATCGGCACTGCCTGGGGCCAGAGCAAGTGC
CACAAGTGTCCCCAGCTGCAGTACACAGGAGTGCAGAAGCCAGGGCCTGTACGT
40 GGGGAAGTGGGCGCTGACTGTCCCCAGGGCTACAAGAGGCTTAACAGCACCCAC
TGCCAGGACATCAACGAGTGCGCAATGCCGGGCGTGTGTGCGCCATGGTGACTGC
CTCAACAACCCTGGCTCCTATCGCTGTGTCTGCCACCTGGCCATAGTTTAGGCC
CCTCCCGTACACAGTGCATTGCAGACAAACCGGAGGAGAAGAGCCTGTGTTTCC
GCCTGGTGAGCCCTGAGCACCAGTGCCAGCACCCACTGACCACCCGCTGACCC
45 GCCAGCTCTGCTGCTGCAGTGTGCGCAAGGCCTGGGGCGCGCGGTGTGAGCGCT
GCCCAACAGATGGCACCGCTGCGTTCAAGGAGATCTGCCAGCTGGGAAGGGAT
ACCACATTCTCACCTCCCACCAGACGCTCACCATTAGGGGCGAGAGTGACTTTTC
CCTTTTCTGCAACCCTGACGGGCCACCCAAGCCCCAGCAGCTTCCGGAGAGCCCT
AGCCAGGCTCCACCACCTGAGGACACAGAGGAAGAGAGAGGGGTGACCACGGA

CTCACCGGTGAGTGAGGAGAGGTGAGTGCAGCAGAGCCACCCAACTGCCACCAC
GACTCCTGCCCCGGCCCTACCCCGAGCTGATCTCCCGTCCCTCGCCCCCGACCATG
CGCTGGTTCTCTGCCGGAAGTTCCTTCCCGCAGCGCCGTAGAGATCGCTCCCA
CTCAGGTACAGAGACTGATGAGTGCCGACTGAACCAGAACATCTGTGGCCACG
5 GAGAGTGCCTGCCGGGCCCCCTGACTACTCCTGCCACTGCAACCCCGGCTACCG
GTCACATCCCCAGCACCGCTACTGCGTGGATGTGAACGAGTGCGAGGCAGAGCC
CTGTGGCCCCGGGAGGGGGCATCTGCATGAACACCGGCGGCTCCTACAATTGCCA
CTGCAACCGCGGCTACCGCCTGCACGTGGGCGCCGGGGGGCGCTCGTGCCTGGA
CCTGAACGAATGCGCCAAGCCCCACCTGTGCGGCGACGGCGGCTTCTGCATCAA
10 CTTTCCCGGTCACTACAAGTGCAACTGCTACCCCGGCTACCGGCTCAAAGCCTCC
CGGCCTCCTGTGTGCGAAGACATCGACGAGTGCCGGGACCCAAGCTCTTGCCCG
GATGGCAAATGCGAGAACAAGCCCGGGAGCTTCAAGTGCATCGCCTGTCAGCCT
GGCTACCGCAGCCAGGGGGGGCGGGGCCTGTGCGGACGTGAACGAGTGCGCCGAG
GGCAGCCCCCTGCTCGCCTGGCTGGTGGCGAAGCTCCCGGGCTCCTTCCGCTGCA
15 CCTGTGCCCAGGGCTACGCGCCCCGCGCCCGACGGCCGAGTTGCTTGGATGTGGA
CGAGTGTGAGGCTGGGGACGTGTGTGACAATGGCATCTGCAGCAACACGCCAGG
ATCTTTCCAGTGTGAGTGCCTCTCTGGCTACCATCTGTCCAGGGACCGGAGCCAC
TGCAGGACATTGATGAGTGTGACTTCCCTGCAGCCTGCATTGGGGGTGACTGCA
TCAATACCAATGGCTCCTACAGATGTCTTTGCCCCCAGGGGCATCGGCTGGTGGG
20 TGGCAGGAAATGCCAAGACATAGATGAGTGCAGCCAGGACCCGAGCCTGTGCCT
TCCCCATGGGGCCTGCAAGAACCTTCAGGGGCTCCTATGTGTGTGTCTGCGATGAG
GGCTTCACTCCACCCAGGAGCAGCAGGTTGTGAGGAGGTGGAGCAGCCCCAC
CACAAGAAGGAGTGCTACCTGAAGTTCGATGACACAGTGTCTGCGAAGCGTA
TTGGGCACCAACGTGACCCAGCAGGAGTGCTGCTGCTCTCTGGGGGGCCGGCTGG
25 GCGGACCACTGCGAAATCTACCCCTGCCAGTCTACAGCTCAGCCGAGTCCACA
CAACATACGAGCATGCGAAAG

SEQ ID NO: 652

>21553 BLOOD INCYTE_3437994H1

30 GGCGGGCAGGCGACTCCTGTCCCGGGTGGAGGCGGCGGANCGGANGCCGGGGG
AGGGGGCAGCGGCTGTCTCACGGACCACGGCGGCGCCCGCAGCTCCTCACC
ACAAGGAGACCAGTGCTGGTCCAANGGCTGTGATGGGAAAAGATTATTACAAGA
TTCTTGGGATCCCATCGGGGGCCAACGAGGATGAGATCAAGAAAGCCTACCGGA
AGATGGCCTTGAAGTACCACCCAGACAAGAATAAA

35

SEQ ID NO: 653

>21568 BLOOD 407563.4 Y17829 g4128042 Human mRNA for Homer-related protein
Syn47.0

40 CCCAGCTCTCCTGGCCCCAACGCGGGCTTAGCCTCCCGCCTTGGCTCGGGCAGGA
NCCCGTCGACCCTTCGGCCCCCTTCGCCCCCCTGGAGCTGGGGGCAGGGTGCCA
GTGGAAGCGTGGGGCTTGGCTCTGTGATTCAATTCATCTCCGCCGACGGGAGCCT
CAGACCCGCTGTGCTCTGAAGAGAGGAGGGAAGAGGGGGCAGCCGCGAATGAA
GGGCCGGGCACCAGCCGGGCTCCATTGTGCTCGGCGGCGGGGGGCGGGAAGGGG
CTGAGGGAGGTGGGATCGGGTCCCCTCCTCCAGCTCTCCGGCGTGCGCTGCGCCC
45 CCAGCCTGCTGCCAGCCTGGAAATGGCTCCGTTTATTCTCTTCGGGAGAATGAAT
CGATCCTGCCTAGCCTTCTCTTCGTCTCCCACTCTTCTCTGCTCCGAGTCTTA
GGAGGAGAAACATTTAAAAAGACAGATTCCAATGTGGAGTGCCGTGCAGGTTGC
GAGCTGCCGGGTTTGCACTTCGAGGAGATTTTCCTGTGTAGTTTTTTTCTAATGT
GAGCGCAGGGAAGCCGTGGCATTACTGCTTTTGGGATTTTATTACGTGCACGT

CGCGTTTGGTTGCTCGCTCCACCCCCGGAGACCTGGTGTGGTGGAGAAATTTGAA
CCCGCAGCCTTAGCTCCGAAAAGGCCGAGTTACCTGGCTCTCCCTGAGTGTGAG
GAGGACATGAGTGAAATGACCAGCGAACTCATTTTTTATAGGACTCGGTGAAGC
CGGATTCTGCATTTCCCTACTTGTAGACTCATTTTGTGGAATAGAGTTGATCGCTG
5 TCTCCTCCGCAAAGCATTTTAACTCGAATAAGCAAATGCCGCCTCTGTTTGAACG
TTTTGGTATTTACAAGAGAGAAATCATTTTACCTAAGAGAACTAATTGAATTGGC
AGCATCCTTGAAATACCTCCGGACAAGGATCTGGGGGTGGGGGTGGAAAAGCAA
CTGCGAAATAGCAGACGGAGAAATTCCTTTGGAAGTTATTCCGTAGCATAAGAG
CTGAAACTTCAGAGCAAGTTTTTCATTGGGCAAAATGGGGGAACAACCTATCTTCA
10 GCACTCGAGCTCATGTCTTCCAAATTGACCCAAACACAAAGAAGAACTGGGTAC
CCACCAGCAAGCATGCAGTTACTGTGTCTTATTTCTATGACAGCACAAGAAATGT
GTATAGGATAATCAGTTTAGATGGCTCAAAGGCAATAATAAATAGTACCATCAC
CCCAAACATGACATTTACTAAAACATCTCAGAAGTTTGGCCAGTGGGCTGATAGC
CGGGCAAACACCGTTTATGGATTGGGATTCTCCTCTGAGCATCATCTTTCGAAAT
15 TTGCAGAAAAGTTTCAGGAATTTAAAGAAGCTGCTCGACTAGCAAAGGAAAAAT
CACAAGAGAAGATGGAACCTTACCAGTACACCTTCACAGGAATCCGCAGGCGGGG
ATCTTCAGTCTCCTTTAACACCGGAAAGTATCAACGGGACAGATGATGAAAGAA
CACCTGATGTGACACAGAACTCAGAGCCAAGGGCTGAACCAACTCAGAATGCAT
TGCCATTTTTCACATAGTTTCAGCAATCAGCAAACATTGGGAGGCTGAACTGGCTAC
20 CCTCAAAGGAAATAATGCCAACTCACTGCAGCCCTGCTGGAGTCCACTGCCAAT
GTGAAACAATGGAAACAGCAACTTGCTGCCTATCAAGAGGAAGCAGAACGTCTG
CACAAGCGGGTGACTGAACTTGAATGTGTTAGTAGCCAAGCAAATGCAGTACAT
ACTCATAAGACAGAATTAATCAGACAATACAAGAAGTGGAAAGAGACAETGAAA
CTGAAGGAAGAGGAAATAGAAAGGTTAAACAAGAAATTGATAATGCCAGAGA
25 ACTACAAGAACAGAGGGATTCTTTGACTCAGAACTACAGGAAGTAGAAATTCTG
GAACAAAGACCTGGAGGGACAACCTGTCTGACTTAGAGCAACGTCTGGAGAAAAG
TCAGAATGAACAAGAAGCTTTTCGCAATAACCTGAAGACACTCTTAGAAATTCTG
GATGGAAAGATATTTGAACTAACAGAATTACGAGATAACTTGGCCAAGCTACTA
GAATGCAGCTAAGGAAAGTGAAATTTAGTGCCAATTAATTAAGATACACTG
30 TCTCTCTTCATAGGACTGTTTAGGCTCTGCATCAAGATTGCNNNNNNNNNNNNNN
NNNNNNNTTGAATATCACTCCTCCAGGAGGAGGATCTTTTGAAATTGGAATTGTA
TATTTCACTGTAAATTTTAGAATCCAGCTTGTAGCTAGTTGGGGAAAAAAGATGA
AAAACCTTGAACACAAATTACCTCCATGTATATTATTGGCCATAGTTAACTAGAA
AGTTATAAATAGACACTTAATGCAATCTTTTTTCTGATATTAGCCAATGGGAGA
35 ATTAACAATGTCTAGGTCACATCCCCTTTTTGTGTTCAACACAGTGAAGATTATCT
GCTTTTTAAATTAATTTATTTACGATATCTAGAGCTGTGTTTTGTGCAAAAACCTA
GTGATGAAAGCCTGTCTTTTGTGTAATCTGAATAATTTCTCAGGATATTTTTGCA
CTGCTGAGAAGCAGTGCCATTACCAATTAATTTCTTGCCAGGAGTGAGAGAGAGC
TGTATCTTTAATTGAAATATACTATAACTGGGTGTATAGAGTTCTTCCCTTTTTTG
40 TGCTGGAAGATATTTCACTCTGGTGACTACTCTGGTACACTCTGGTGTTCTCTAAT
CTTGTCTGTTGTATAGTTTACTTTTCCATATTGATTCCATGTATTTATGAGAAGAT
ATTGTCTCCCATTTTATTACACATTTTAAAGCCAACTAACGAAGGCAGCTGAGTC
CCTCAGAAATTTTCTTTTAAAGTTTCTAATAAATTTGACACACAGTACTGAAATA
CAGCAGCCCGTCATTGACAGGCTGGTCTAGCAATGTAAAGTATATTTACAGAATA
45 TGCAGTTACATTTATTTATATATTTTGCAAGAAATCTTTTCTGAATGATCAATGCA
TTTCAATTTACGAATAATAATGGTTATTGGGGAACTGTTTATTATAGATAATTTA
AGGTGTATAGCTATTTTAAAGGGGGTCCATTTACATCAAACAGCCGATCAGAGG
ACTCTATCTAAATTGTGATCGTGGCAGATAGAGATGGAGTCATGTACTCTATCTG
GCTCTACACATCAATCACATCTTGATTCAAACCTCACAAGGCAATATTCTGAATT

GTAACTAGGTATTTCAAACAGGAATTAAATTCAATAGGCTCTTCTCAGTGAAC
AGGTTTTAATGTTGTTTTGATGTAATTTTAAAAGACTTTTAGCAAACATGCATTTCT
TTTATATGATATATTTCTTTTACGAAGCTATTTTAAAAGTAAGCCAAGTGCTGTCT
AGTCTGCTTATAAAGTAGGAATTGCATCAGAGTACATATATTCTTGCTGTACAAT
5 GCCTGTGATGTTGAGGAGGGTTCTTTTTTAAAGTGTATGCTTGAGTAACTGACTCT
ATGGAGTCTATAAATGCACTGACTTCTTGTTGTACCCCAAATGATCGAATTGT
TAAGTACAAAATTAAGCTAATTAACCAATTTGTAACCATTTTTTCACTCATAAAC
AGCTACTCAATACTAGACAATTTTGTTTTTTATGTATGTGTATGTACGTAAATACA
TACATATTAATTTACATTAGAGTGAAAAATAAATGGTTTGTTTCTGAAGTTAGTTT
10 CTTAAGTGAGTTTTTCAGGTGTCTCTGAAAAATTTATAACAATCATGTATTATATGT
GCTGTAACATCATGTACGTTACCTCCATCTATTTTAGGATATTTTCCTCACCTATA
TATTATAGGGAGAATAATTTAGATACACATGCTCAGAGCTGAGATATTTCTCTGA
TAAATCAGGTAACAAAATGTATTTGATTGATGGAATTTTGAAGTAAATGTGTTTT
TATCCATCAGTTTCTGAGTAACAAAGAGCACCAAGTTTAAATTTAAATAGGAGAT
15 TTAACACTAGGGATCAGGGAGTTTAGTATGAAGAGTTAAAAAAATTTAAAAAAC
AGTGTAAGCTGTTGAAATGGCAAGTGAATTATTTTAATGATGTAATAAAATATTT
TTAAATTTTGACATAGTGATCATTTAATGAAAAAACTCACCAAAATGTCTCCATT
TGAATTGTATTGATAATGTGGGACATATGTGTGATTCAATATATACATATACCCA
TATGTATATACAGAAAATTATTTTAATACTTTCCTACTGATAATGAAATTTAAAA
20 TTGGAAATTTTGTGAGTGTTTTTCTTGTCCAATAGAGCCTAATTGTTTCCTTTTTTA
GTGATTTAACAATCTCTTGAGGGCTGCACCTTTAAATTTCCAGATTGTCAATAGA
CATGTACAGTATATGGGATAAGGTGGACACAAGTGCACATATAAATAAAATCTT
CTTAAGACTTTTAACTATTCAATTTACAGTAGGAGAGTATGTAGAAATCATCATCC
ACAAGTCATAATTAGGTTGTGTGCCTACTGTAAGTTTTTTCCATTCTGTATTATAT
25 AAACATTTGCATATTAATAATTTGATTTTTCCAGAGACAAGTATTATATACTGTAT
CTATATTTAAATCAAACGTGGTAATATATTTCTCAGAAAATAATGTTGGGGACT
ATAGCCTGAACATGTGGACTTGAAGCGACATGGAGGAGGAGGTTGATCCCATTTG
TGTATAAGTTAATATGTGATAACTATTGAATCTTGTACAAAAACAAAATTGANA
AANANAAAGAAAAGCAAAAATACAGTTTTTATTTTGAAATACATTTGTTCTCTGG
30 AGAATGTACTTTATCTTTTTTCTCCTCCAGTCTTTTACAGATATTTAAAAGCATTTA
AATGATGACAGCATTACTTAAATCTTTCAGGTGCTACTGGATTTTGCATTAGTGT
GTTATGTTGTGAAATCCTAACTTTGACATAAAAGGTTTTATAAGTATTTCCCTGCC
TGGAATTAAGTTTTTGTCTCCNCTCTCTCTCTTTCTCTTNTCCACTTTCTTTCTG
CAGACTAAACATGCTCACGAAGTTGCATCTCTCCTTGTCTCTATAGAAGATCTC
35 CAGCACCATCATAGATTTGATGTTCTGCTGTCATTGNACTGTTGGGAAGCAGTTA
GAGGAAAAGCTCACTTTTTTTTTTCAGGTGGAAATAAAAGGAACACTCAAAATTA
AGCCAACACCACCACTACCTTTAAAAAACTAGTTTATTTGCCCTGTTAAAATTA
TGATTCTTNAACATGTGGGCTACAGTCTCCCATGTTTTTATTTAACTGAAGCATAT
ACACTTCGGNCATTTATCTCCTGTGGNCCTGATTTTGTGAGTACTGGAATG
40

SEQ ID NO: 654

>21590 BLOOD INCYTE_3985758H1

GCNACGGTTGGCGCTCGNCCTGGAGCCTGCCCTGGCGTNCCCCCGCGGGCGCAG
CCAAGCTTCTTGGCNATGGTAGATAACTGCAGGGGACTCTGGCCGCGGCTAACTA
45 NCCTGGAGATGCTGATCGGGACCCCCCGCAGAAGCTACAGATTCTCGTTGACA
NTGGAAGCAGTAACTTTGA

SEQ ID NO: 655

>21591 BLOOD 404604.3 AF122922 g4585369 Human Wnt inhibitory factor-1 mRNA, complete cds. 0

CCCAGCCGTCTAAACGGGAACAGCCCTGGGCTGAGGGAGCTGCAGCGCAGCAGA
 5 GTATCTGACGGCGCCAGGTTGCGTAGGTGCGGCACGAGGAGTTTTCCCGGCAGC
 GAGGAGGTCCTGAGCAGCATGGCCCGGAGGAGCGCCTTCCCTGCCGCCGCGCTC
 TGGCTCTGGAGCATCCTCCTGTGCCTGCTGGCACTGCGGGCGGAGGCCGGGCCGC
 CGCAGGAGGAGAGCCTGTACCTATGGATCGATGCTCACCAGGCAAGAGTACTCA
 TAGGATTTGAAGAAGATATCCTGATTGTTTCAGAGGGGAAAATGGCACCTTTTAC
 10 ACATGATTTTCAGAAAAGCGCAACAGAGAATGCCAGCTATTCCTGTCAATATCCAT
 TCCATGAATTTTACCTGGCAAGCTGCAGGGCAGGCAGAATACTTCTATGAATTCC
 TGTCTTTCGCTCCCTGGATAAAGGCATCATGGCAGATCCAACCGTCAATGTCCC
 TCTGCTGGGAACAGTGCCTCACAAGGCATCAGTTGTTCAAGTTGGTTTCCCATGT
 CTTGGAAAACAGGATGGGGTGGCAGCATTGAAAGTGGATGTGATTGTTATGAATT
 15 CTGAAGGCAACACCATTCTCCAAACACCTCAAAATGCTATCTTCTTAAAACATG
 TCAACAAGCTGAGTGCCAGGCGGGTGCCGAAATGGAGGCTTTTGTAAATGAAAG
 ACGCATCTGCGAGTGTCTGATGGGTTCCACGGACCTCACTGTGAGAAAGCCCTT
 TGTACCCACGATGTATGAATGGTGGACTTTGTGTGACTCCTGGTTTCTGCATCTG
 CCCACCTGGATTCTATGGAGTGAAGTGTGACAAAGCAAAGTCTCAACCACCTGC
 20 TTTAATGGAGGGACCTGTTTCTACCCTGGAAAATGTATTTGCCCTCCAGGACTAG
 AGGGAGAGCAGTGTGAAATCAGCAAATGCCCAACCCCTGTCGAAATGGAGGTA
 AATGCATTGGTAAAAGCAAATGTAAGTGTTCCAAAGGTTACCAGGGAGACCTCT
 GTTCAAAGCCTGTCTGCGAGGCTGGCTGTGGTGCACATGGAACCTGCCATGAACC
 CAACAAATGCCAATGTCAAGAAGGTTGGCATGGAAGACACTGCAATAAAAGGTA
 25 CGAAGCCAGCCTCATAATGCCCTGAGGCCAGCAGGCGCCAGCTCAGGCAGCA
 CACGCCTTCACTTAAAAAGGCCGAGGAGCGGCGGGATCCACCTGAATCCAATTA
 CATCTGGTGAAGTCCGACATCTGAAACGTTTTTAAGTTACACCAAGTTCATAGCCT
 TTGTTAACCTTTCATGTGTTGAATGTTCAAATAATGTTTCATTACACTTAAGAATAC
 TGGCCTGAATTTTATTAGCTTCATTATAAATCACTGAGCTGATATTTACTCTTCT
 30 TTTAAGTTTTCTAAGTACGTCTGTAGCATGATGGTATAGATTTTCTTGTTCAGTG
 CTTTGGGACAGATTTTATATTATGTCAATTGATCAGGTTAAAATTTTCAGTGTGTA
 GTTGGCAGATATTTTCAAATTACAATGCATTTATGGTGTCTGGGGGCAGGGGAA
 CATCAGAAAGGTTAAATTGGGCAAAAATGCGTAAGTCACAAGAATTTGGATGGT
 GCAGTTAATGTTGAAGTTACAGCATTTTCAGATTTTATTGTCAGATATTTAGATGTT
 35 TGTTACATTTTAAAAATTGCTCTTAATTTTAAACTCTCAATACAATATATTTTG
 ACCTTACCATTATTCCAGAGATTCAGTATTAAAAAATAAATAAATTACACTGTGG
 TAGTGGCATTTAACAATATAATATATTCTAAACACAATGAAATAGGGAATATA
 ATGTATGAACTTTTGCATTGGCTTGAAGCAATATAATATATTGTAAACAAAACA
 CAGCTCTTACCTAATAAACATTTTATACTGTTTGTATGTATAAAATAAAGGTGCT
 40 GCTTTAGTTTTCTGAGCATTGTGTGGAGGTNANCTTTGCACATGCTATCTTATGAA
 AATAAAATTGGTTGCAATTTAGTGGT

SEQ ID NO: 656

>21600 BLOOD 480735.6 U60477 g1575342 Human apolipoprotein AI regulatory protein-1/chicken ovalbumin upstream promoter transcription factor II (TFCOUP2) gene, complete cds. 0

45 CATCGAGTGCGTGGTGTGCGGAGACAAGTCGAGCGGCAAGCACTACGGCCAGTT
 CACGTGCGAGGGCTGCAAGAGCTTCTTCAAGCGCAGCGTGCGGAGGAACCTGAG
 CTACACGTGCCGCGCCAACCGGAAGTGTCCCATCGACCAGCACCATCGCAACCA

GTGCCAGTACTGCCGCCTCAAAAAGTGCCTCAAAGTGGGCATGAGACGGGAAGG
TATCGGCCTCTCATTTCTCCTTCCCTCGTCCTGGGTCCCAGGGTCTGGGTACGTT
TGGCTAGCCTGCTCTGGGTAAGGACAAGAAGCCCCAAGCTCTTCTCTTCGTATTG
CAGCGGAAAAGGGTTTTATACTAGAAGCGAGTTCTGCATTGGAACCCAGACCCC
5 AAATCCGCATGCTTTGGCCGACTGATTTCTTCTTTACTCTCTCTTTGGGCTGTTTC
CATTTCTTTGCATTGATTGTGAGTTCACTGGAGTCTGCCTTTCTGCAAGGGATGG
GGTGTGTTGTTGTTCGTTTTAAAGCCTAGTTTACTTCTCTCTCTGCCCTTGTTT
TTCCTGCATGTTCAACATGTCCCACCCCC

10 SEQ ID NO: 657

>21611 BLOOD INCYTE_4504614H1

GGCAAGATCTGGAAGCTGGCCGACTGCGACTGCGACGGCATGCTTGATGAGGAG
GAGTTCGCGCTGGCCAAGCACCTCATCAAGATCAAGCTCGACGGCTACGAGCTG
CCCAGCAGCCTGCCCCCCCCACCTCGTGCCCCCCTCGCACAGGAAGTCCCTGCCCA
15 AGGCCGACTGAGGGGTGGGCTGCAGAACGGGGTGGGAATGGGGGACCTGGGCC
TCAGGCCTGCTC

SEQ ID NO: 658

>21621 BLOOD 253228.8 Incyte Unique

20 GGAGCGCTTGGTGACGATCCACGTACGCTTGGTGACTGGTGGAGGTCCCAGAG
AAGGACCGTGCGTGCAAAAGGCGAACCTCGGTGTGCGGTGTGTCCACGTGTGCA
AGCTGGGGAGGGGAGGGGGGCGCAGAAGGCGTGAGTGTGCGCGCGCCCCGCATGC
GGGGGCGTGGCAGTCAACAGCAACAACCCACACGCCGGCAGGGGCCAGAACTCC
CATCTCCCTCACCGCCGAAAGTACGAGTCGGGTCAGCCTGGAGGGACCCAAC
25 CAGAGCCTGGCCTGGGAGCCAGGATGGCCATCCACAAAGCCTTGGTGATGTGCC
TGGGACTGCCTCTCTTCTGTTCCAGGGGCCTGGGCCCAGGGCCATGTCCCACC
CGGCTGCAGCCAAGGCCTCAACCCCTGTACTACAACCTGTGTGACCGCTCTGGG
GCGTGGGGCATCGTCTTGAGAGCCGTGGCTGGGGCGGGCATTGTACCCACGTTTG
TGCTCACCATCATCCTGGTGGCCAGCCTCCCCTTTGTGCAGGACACCAAGAAACG
30 GAGCCTGCTGGGGACCCAGGTATTCTTCTTCTGGGGACCTGGGCCTCTTCTGC
CTCGTGTGTTGCCTGTGTGGTGAAGCCCGACTTCTCCACCTGTGCCTCTCGGCGCTT
CCTCTTTGGGGTTCTGTTCCGCATCTGCTTCTCTTGTCTGGCGGCTCACGTCTTTGC
CCTCAACTTCCTGGCCCGGAAGAACCACGGGCCCCGGGGCTGGGTGATCTTCACT
GTGGCTCTGCTGCTGACCCTGGTAGAGGTATCATCAATACAGAGTGGCTGATCA
35 TCACCCTGGTTTCGGGGCAGTGGCGAGGGCGGCCCTCAGGGCAACAGCAGCGCAG
GCTGGGGCCGTGGCCTCCCCCTGTGCCATCGCCAACATGGACTTTGTGCATGGCACT
CATCTACGTATGCTGCTGCTGCTGGGTGCCTTCTTGGGGGCTGGCCCGCCCTG
TGTGGCCGCTACAAGCGCTGGCGTAAGCATGGGGTCTTTGTGCTCCTCACCACAG
CCACCTCCGTTGCCATATGGGTGGTGTGGATCGTCATGTATACTTACGGCAACAA
40 GCAGCACAACAGTCCCACCTGGGATGACCCACGCTGGCCATCGCCCTCGCCGCC
AATGCCTGGGCCTTCGTCTCTTCTACGTCATCCCCGAGGTCTCCCAGGTGACCA
AGTCCAGCCCAGAGCAAAGCTACCAGGGGGACATGTACCCACCCGGGGCGTGG
GCTATGAGACCATCCTGAAAGAGCAGAAGGGTCAGAGCATGTTTCGTGGAGAACA
AGGCCTTTTCCATGGATGAGCCGGTTGCAGCTAAGAGGCCGGTGTACCATACAG
45 CGGGTACAATGGGCAGCTGCTGACCAGTGTGTACCAGCCCACTGAGATGGCCCT
GATGCACAAAGTTCCGTCCGAAGGAGCTTACGACATCATCCTCCCACGGGGCCACC
GCCAACAGCCAGGTGATGGGCAGTGCCAACTCGACCCTGCGGGGCTGAAGACATG
TACTCGGCCCAGAGCCACCAGGCGGCCACACCGCCGAAAGACGGCAAGAACTCT
CAGGTCTTTAGAAACCCCTACGTGTGGGACTGAGTCAGCGGTGGCGAGGAGAGG

CGGTCGGATTGTTGGGGAGGGCCCTGAGGACCTGGCCCCGGGCAAGGGACTCTCCA
GGCTCCTCCTCCCCCTGGCAGGCCCAGCAACATGTGCCCCAGATGTGGAAGGGCC
TCCCTCTCTGCCAGTGTGTTGGGTGGGTGTCATGGGTGTCCCCACCCACTCCTCAGT
GTTTGTGGAGTCGAGGAGCCAACCCCAGCCTCCTGCCAGGATCACCTCGGCGGTC
5 AACTCCAGCCAAATAGTGTCTCGGGGTGGTGGCTGGGCAGCGCCTATGTTTCT
CTGGAGATTCTGCAACCTCAAGAGACTTCCCAGGCGCTCAGGCCTGGATCTTGC
TCCTCTGTGAGGAACAAGGGTGCCTAATAAATACATTTCTGCTTTATTAAGAA
AAACAAAAAAAAGGGG

10 SEQ ID NO: 659

>21628 BLOOD 255990.10 AJ011497 g4128014 Human mRNA for Claudin-7. 0

GCCGGAGGGGACAGTGGTAGGTGGGGAGGTTGAGTGCAAAGGGTTCAGGCTGTA
AGTCATGTTGGGTGGAATGGGGGCACAGGAAGGTGGGGCTGTTGGGGAGCCAC
GCTAAGCCGGGTGTCTGTAGCAGAGCCAGAGAACCGGGACACTGAAGAGGGTGC
15 TGAAGGGGGCGACTCTCAGGGATCGAGCCAGGGCCCCCGAAGGTGGGATCGACC
AGGGTAGGAGACAGGAAAAAAGGAGAGCAGCGGGTGGGGGCGAAAGCAGG
GCCGAGGAGAGAGCACTTTGGACAGAACCCGGCGGGGAAAGGGCGGCGCCGAG
GCTTGTGAGGGGCGCCCCGCAGCGTCCCAGGCGCACCTGTTGGGAAGAAAGGAA
GGGGCTTCCCGGTGTTTCGAGGGAAATCCAGTCCGGAGGGGCTGACTCGGAGCTT
20 GGGACTCCTGGGGAGCCACCGCCTCCTCCCCAGCGGCGGTCAAACCGGGCAAG
CGAAGGGGCGTGACCCTGGTGCTCAGGTTTCTTCTCCTCACCTGGGCAAGGAGG
GGTGGGGGGCCACGACTTECGGTTTCAGGTGAGTGTCCCTTCGGTGACGTCAGGTCA
TCCTCGGGCCGCCCTCCGGTCCCGCCTCCCCCTGCCGCGCTCCCGGGGCGCGCGG
GCCGCGCCCCCGACGCCCTACATATACTCAGGTGCGCCCCACCTGTCCGGCCGCA
25 CCTGCTGGCTCACCTCCGAGCCACCTCTGCTGCGCACCGCAGCCTCGGACCTACA
GCCCAGGATACTTTGGGACTTGCCGGCGCTCAGAAACGCGCCAGACGGCCCT
CCACCTTTTGTGTTGCCTAGGGTCGCCGAGAGCGCCCGGAGGGAACCGCCTGGCCT
TCGGGGACCACCAATTTTGTCTGGAACCAACCTCCCGGCGTATCCTACTCCCTGT
GCCGCGAGGCCATCGCTTCACTGGAGGGGTGATTTGTGTGTAGTTTGGTGACAA
30 GATTTGCATTACCTGGCCAAACCCTTTTTGTCTCTTTGGGTGACCGGAAAACCTC
CACCTCAAGTTTTTCTTTTGTGGGGCTGCCCCCAAGTGTGCTTTGTTTTACTGTAG
GGTCTCCCCGCCCGGCGCCCCCAGTGTCTTCTGAGGGCGGAAATGGCCAATTCGG
GCCTGCAGTTGCTGGGCTTCTCCATGGGCCCTGCTGGGCTGGGTGGGTCTGGTGG
CCTGCACCGCCATCCCGCAGTGGCAGATGAGCTCCTATGCGGGTGACAACATCAT
35 CACGGCCCAGGCCATGTACAAGGGGCTGTGGATGGACTGCGTCACGCAGAGCAC
GGGGATGATGAGCTGCAAAATGTACGACTCGGTGCTCGCCCTGTCCGCGGCCTTG
CAGGCCACTCGAGCCCTAATGGTGGTCTCCCTGGTGCTGGGCTTCCTGGCCATGT
TTGTGGCCACGATGGGCATGAAGTGCACGCGCTGTGGGGGAGACGACAAAGTGA
AGAAGGCCCGTATAGCCATGGGTGGAGGCATAATTTTCATCGTGGCAGGTCTTGC
40 CGCCTTGGTAGCTTGCTCCTGGTATGGCCATCAGATTGTACAGACTTTTATAACC
CTTTGATCCCTACCAACATTAAGTATGAGTTTGGCCCTGCCATCTTTATTGGCTGG
GCAGGGTCTGCCCTAGTCATCCTGGGAGGTGCACTGCTCTCCTGTTCTCTGCTG
GGAATGAGAGCAAGGCTGGGTACCGTGTACCCCGCTCTTACCCTAAGTCCAACCTC
TTCCAAGGAGTATGTGTGACCTGGGATCTCCTTGCCCCAGCCTGACAGGCTATGG
45 GAGTGTCTAGATGCCTGAAAGGGCCTGGGGCTGAGCTCAGCCTGTGGGCAGGGT
GCCGGACAAAGGCCTCCTGGTCACTCTGTCCCTGCACTCCATGTATAGTCCTCTT
GGGTTGGGGGTGGGGGGGTGCCGTTGGTGGGAGAGACAAAAGAGGGGAGAGTG
TGCTTTTTGTACAGTAATAAAAAATAAGTATTGGGAAGCAGGCTTTTTTCCCTTC
AGGGCCTCTGCTTTCCTCCCGTCCAGATCCTTGCAGGGAGCTTGGAACCTTAGTG

CACCTACTTCAGTTCAGAACACTTAGCACCCCACTGACTCCACTGACAATTGACT
AAAAGATGCAGGTGCTCGTATCTCGACATTCATTCCCACCCCCCTCTTATTTAAAT
AGCTACCAAAGTACTTCTTTTTTAATAAAAAAATAAAGATTTTATTAGGTAAAN
AAAAAAAAAA

5

SEQ ID NO: 660

>21631 BLOOD 370788.1 AK000072 g7019922 Human cDNA FLJ20065 fis, clone
COL01613, highly similar to ECLC_BOVIN EPITHELIAL CHLORIDE CHANNEL
PROTEIN. 0

10 GACGCGTGGGGCCAGGAATAACTAGAGAGGAACAATGGGGTTATTCAGAGGTTT
TGTTTTCTCTTAGTTCTGTGCCTGCTGCACCAGTCAAATACTTCCTTCATTAAGC
TGAATAATAATGGCTTTGAAGATATTGTCATTGTTATAGATCCTAGTGTGCCAGA
AGATGAAAAAATAATTGAACAAATAGAGGATATGGTGACTACAGCTTCTACGTA
CCTGTTTGAAGCCACAGAAAAAAGATTTTTTTTCAAAAATGTATCTATATTAATT
15 CCTGAGAATTGGAAGGAAAAATCCTCAGTACAAAAGGCCAAAACATGAAAACCAT
AAACATGCTGATGTTATAGTTGCACCACCTACACTCCCAGGTAGAGATGAACCAT
ACACCAAGCAGTTCACAGAATGTGGAGAGAAAGGCCAATACATTCACTTCACCC
CTGACCTTCTACTTGGAAAAAAACAAAATGAATATGGACCACCAGGCAAACCTG
TTTGTCCATGAGTGGGCTCACCTCCGGTGGGGAGTGTTTGATGAGTACAATGAAG
20 ATCAGCCTTTCTACCGTGCTAAGTCAAAAAAATCGAAGCAACAAGGTGTTCCGC
AGGTATCTCTGGTAGAAATAGAGTTTATAAGTGTCAAGGAGGCAGCTGTCTTAGT
AGAGCATGCAGAATTGATTCTACAACAAAACCTGTATGGAAAAGATTGTCAATTCT
TTCTGATAAAGTACAAACAGAAAAAGCATCCATAATGTTTATGCAAAGTATTGA
TTCTGTTGTTGAATTTTGTAAACGAAAAAACCCATAATCAAGAAGCTCCAAGCCTA
25 CAAAACATAAAGTGCAATTTTAGAAGTACATGGGAGGTGATTAGCAATTCTGAG
GATTTTAAAAACACCATACCCATGGTGACACCACCTCCTCCACCTGTCTTCTCATT
GCTGAAGATCAGTCAAAGAATTGTGTGCTTAGTTCTTGATAAGTCTGGAAGCATG
GGGGTAAGGACCGCCTAAATCGAATGAATCAAGCAGCAAAACATTTCTGTCTG
CAGACTGTTGAAAATGGATCCTGGGTGGGGATGGTTCACTTTGATAGTACTGCCA
30 CTATTGTAAATAAGCTAATCCAAATAAAAAGCAGTGATGAAAGAAACACACTCA
TGGCAGGATTACCTACATATCCTCTGGGAGGAACTTCCATCTGCTCTGGAATTAA
ATATGCATTTACAGGTGATTGGAGAGCTACATTCCCAACTCGATGGATCCGAAGTA
CTGCTGCTGACTGATGGGGAGGATAAACAAGTTCTTGTATTGATGAAGTGA
AACAAAGTGGGGCCATTGTTCAATTTTATTGCTTTGGGAAGAGCTGCTGATGAAGC
35 AGTAATAGAGATGAGCAAGATAACAGGAGGAAGTCATTTTATGTTTCAGATGA
AGCTCAGAACAATGGCCTCATTGATGCTTTTGGGGCTCTTACATCAGGAAATACT
GATCTCTCCCAGAAGTCCCTTCAGCTCGAAAGTAAGGGATTAACACTGAATAGTA
ATGCCTGGATGAACGACACTGTCATAATTGATAGTACAGTGGGAAAGGACACGT
TCTTTCTCATCACATGGAACAGTCTGCCTCCCAGTATTTCTCTCTGGGATCCCAGT
40 GGAACAATAATGGAAAATTTACAGTGGATGCAACTTCCAAAATGGCCTATCTC
AGTATTCCAGGAACTGCAAAGGTGGGCACTTGGGCATACAATCTTCAAGCCAAA
GCGAACCCAGAAACATTAACATTACAGTAACTTCTCGAGCAGCAAATTCCTTCTG
TGCCTCCAATCACAGTGAATGCTAAAATGAATAAGGACGTAAACAGTTTCCCCA
GCCCAATGATTGTTTACGCAGAAATTCTACAAGGATATGTACCTGTTCTTGGAGC
45 CAATGTGACTGCTTTCATTGAATCACAGAATGGACATACAGAAGTTTTGGAACCTT
TTGGATAATGGTGCAGGCGCTGATTCTTTCAAGAATGATGGAGTCTACTCCAGGT
ATTTTACAGCATATACAGAAAAATGGCAGATATAGCTTAAAAGTTTCGGGCTCATGG
AGGAGCAAACACTGCCAGGCTAAAATTACGGCCTCCACTGAATAGAGCCGCGTA
CATACCAGGCTGGGTAGTGAACGGGGAAATTGAAGCAAACCCGCCAAGACCTGA

AATTGATGAGGATACTCAGACCACCTTGGAGGATTTTCAGCCGAACAGCATCCGG
 AGGTGCATTTGTGGTATCACAAGTCCCAAGCCTTCCCTTGCCTGACCAATACCCA
 CCAAGTCAAATCACAGACCTTGATGCCACAGTTCATGAGGATAAGATTATTCTTA
 CATGGACAGCACCAGGAGATAATTTTGTATGTTGGAAAAGTTCAACGTTATATCAT
 5 AAGAATAAGTGCAAGTATTCTTGATCTAAGAGACAGTTTTGATGATGCTCTTCAA
 GTAAATACTACTGATCTGTCACCAAAGGAGGCCAACTCCAAGGAAAGCTTTGCA
 TTAAACCAGAAAATATCTCAGAAGAAAATGCAACCCACATATTTATTGCCATTA
 AAAGTATAGATAAAAGCAATTTGACATCAAAAAGTATCCAACATTGCACAAGTAA
 CTTTGTTTATCCCTCAAGCAAATCCTGATGACATTGATCCTACACCTACTTCCTAC
 10 TCCTACTCCTACTCCTGATAAAAGTCATAATTCTGGAGTTAATATTTCTACGCTGG
 TATTGTCTGTGATTGGGTCTGTTGTAATTGTTAACTTTATTTTAAGTACCACCATT
 TGAACCTTAACGAAGAAAAAAATCTTCAAGTAGACCTAGAAGAGAGTTTTAAAA
 AACAAAACAATGTAAGTAAAGGATATTTCTGAATCTTAAAATTCATCCCATGTGT
 GATCATAAACTCATAAAAATAATTTTAAGATGTCGGAAAAGGATACTTTGATTAA
 15 ATAAAAACACTCATGGATATGTAAAAACTGTCAAGATTAAAATTTAATAGTTTCA
 TTTATTTGTTATTTTATTTGTAAGAAATAGTGATGAACAAAGATCCTTTTTTCATAC
 TGATACCTGGTTGTATATTATTTGATGCAACAGTTTTCTGAAATGATATTTCAAAT
 TGCATCAAGAAATTAATAATCATCTATCTGAGTAGTCAAAATACAAGTAAAGGAG
 AGCAAATAAACACATTTGGAAAAAAATG

SEQ ID NO: 661

>21656 BLOOD INCYTE_547531H1
 CGAAAGTTGCTGGTTCATATCTGCCACCACTGTATCAGCTAAAACAGGCANTC
 AGGANTTGTTCAGGGGTTAAGAAAGGGTTTGAGGTGGTTGAAAACTGAATGGA
 25 AAAGCTTATGGCTCTGTGATGATATTAGTGACCAGCGGAGATGATAAGCTTCTTG
 GCAATTGCTTACCCACTGTGCTCAGCAGTGGTTCAACAATTCCTCCATTGCCCT
 GGGTTCATCTGCAGCCCCAAATCTGGA

SEQ ID NO: 662

>21660 BLOOD 238908.1 AL137516 g6808175 Human mRNA; cDNA DKFZp564M2178
 (from clone DKFZp564M2178); partial cds. 0
 GAACCACCGGCAGACGCACCTCCGGGGCCACACCCACCAAGGCTCCTGCCCTGTT
 GTCCTGGGGTCCCCAGTTGTTCTAGGGCCTCCTGTGGGCCAGGCCCGAGTGGCTG
 TGGAGCACTCATACCGAAAGGCAGAAGAGGGTGGGGAAGGGGCGACTGTCCCAT
 35 CTGCCGCTGCCACCACCACTGAGGTAGTGACTGAGGTGGAGCTGCTCCTCTACAA
 GTGCTCTGAGTGCTCCAGCTCTTCCAGCTGCCGGCGGATTTCTTGAGCACCAG
 GCCACTCACTTCCCTGCTCCTGTACCCGAGTCTCAGGAGCCTGCCTTACAGCAGG
 AGGTGCAGGCCTCGTCACCTGCAGAGGTGCCTGTGTCTCAGCCTGACCCCTTGCC
 AGCTTCTGACCACAGTTACGAGCTGCGCAATGGTGAAGCCATTGGGCGGGATCG
 40 CCGGGGGCGCAGGGCCCGGAGGAACAACAGTGGAGAAGCAGGCGGGGCAGCCA
 CACAGGAGCTCTTCTGCTCAGCCTGTGACCAGCTCTTTCTCTCACCCACAGCTA
 CAGCAGCACCTGCGGAGTCACCGGGAGGGCGTCTTTAAGTGCCCCCTGTGCAGTC
 GTGTCTTCCCTAGCCCTTCCAGTCTGGACCAGCACCTTGGAGACCATAGCAGCGA
 GTCACACTTCCTGTGTGTAGACTGTGGCCTGGCCTTCGGCACAGAGGCCCTCCTC
 45 CTGGCCCACCGGCGAGCCACACCCCGAATCCTCTGCATTTCATGTCCATGTGGGA
 AGACCTTTGTCAACCTTACCAAGTTCCTTTATCACCGGCGTACTCATGGGGTAGG
 GGGTGTCCCTCTGCCACAACACCAAGTCCCACCAAGAGGAACCTGTCATTGGTTTC
 CCTGAGCCAGCCCCAGCAGAGACTGGAGAGCCAGAGGCCCTGAGCCCCCTGTG
 TCTGAGGAGACCTCAGCAGGGCCCGCTGCCCCAGGCACCTACCGCTGCCTCCTGT

GCAGCCGTGAATTTGGAAAGGCCTTGCAGCTGACCCGGCACCAACGTTTTGTGCA
TCGGCTGGAGCGGCGCCATAAATGCAGCATTTGTGGCAAGATGTTCAAGAAGAA
GTCTCACGTGCGTAACCACCTGCGCACACACACAGGGGAGCGGCCCTTCCCCTGC
CCTGACTGCTCCAAGCCCTTCAACTCACCTGCCAACCTGGCCCCGCCACCGGCTCA
5 CACACACAGGAGAGCGGCCCTACCGGTGTGGGGACTGTGGCAAGGCTTTCACGC
AAAGCTCCACACTGAGGCAGCACCGCTTGGTGCATGCCCAGCACTTCCCCTACCG
CTGCCAGGAATGTGGGGTGCCTTTTACCGTCTTACCGCCTGCTCATGCACCGC
TACCATCACACAGGTGAATACCCCTACAAGTGTGCGGAGTGCCCCCGCTCCTTCT
TGCTGCGTTCGGCTGCTGGAGGTGCACCAGCTCGTGGTCCATGCCGGGCGCCAGCC
10 CCACCGCTGCCCATCCTGTGGGGCTGCCTTCCCCTCCTCACTGCGGCTCCGGGAG
CACCGCTGTGCAGCCGCTGCTGCCCAGGCCCCACGGCGCTTTGAGTGTGGCACCT
GTGGCAAGAAAGTGGGCTCAGCTGCTCGACTGCAGGCACACGAGGCGGCCCATG
CAGCTGCTGGGCCTGGAGAGGTCTGGCTAAGGAGCCCCCTGCCCTCGAGCCCC
ACGGGCCACTCGTGCACCAGTTGCCTCTCCAGCAGCCCTTGGAAGCACTGCTACA
15 GCATCCCCTGCGGCCCTGCCCGCCGCCGGGGTCTAGAGTGCAGCGAGTGCAAG
AAGCTGTTTCAGCACAGAGACGTCACTGCAGGTGCACCGGCGCATCCACACAGGT
GAGCGGCCATACCCATGTCCAGACTGTGGCAAAGCGTTCCGTCAGAGTACCCAC
CTGAAAGACCACCGGCGCCTGCACACAGGTGAGCGGCCCTTTGCCTGTGAAGTG
TGTGGCAAAGGCCTTTGCCATCTCCATGCGCCTGGCAGAACATCGCCGCATCCACA
20 CAGGCGAACGACCCTACTCCTGCCCTGACTGTGGCAAAGAGCTACCGCTCCTTCTC
CAACCTCTGGAAGCACCGCAAGACCCATCAGCAGCAGCATCAGGCAGCTGTGCG
GCAGCAGCTGGCAGAGGCGGAGGCTGCCGTTGGCCTGGCCGTCATGGAGACTGC
TGTGGAGGCGCTACCCCTGGTGGAAGCATTGAGATCTACCCTCTGGCCGAGGCT
GAGGGGGTCCAGATCAGTGGCTGACTCTGCCCCGACTTCCTCTTGGCACCTCCAT
25 TCCCTGTTGCTGAAGGCCCTCCAGCATCCCCTTAAGCATCTGTACATACTGTGTCC
CTTCTCTTCCCATCCCCACCACCTTGTAAGTTCTAAATTGGATTTATTCTCTCGT
GAGGGGGGTGCTCTGGGGTCTTGACACACATAAAGGTGCCCCCCCACCTTCCAC
CTCTTAGCACTGGTGACCCCAAAAATGAAACCATCAATAAAGACTGAGTTGCC

30 SEQ ID NO: 663

>21669 BLOOD 132774.1 Incyte Unique

GCCGGACAGAGCAGAAGAACCCTCTTGGACTGGACGATTTGGGAATTCAAAACT
TGGGACAAACTGTCAGCCTTGCCCTGCTGTGGAGGCAGCCTCAATGCTGAAAAT
GGAGCCTCTGAACAGCACGCACCCCGGCACCGCCGCCTCCAGCAGCCCCCTGGA
35 GTCCCGTGCGGCCGGTGGCGGCAGCGGCAATGGCAACGAGTACTTCTACATTCTG
GTTGTTCATGTCCTTCTACGGCATTCTTCTTGATCGGAATCATGCTGGGCTACATGAA
ATCCAAGAGGCGGGGAGAAGAAGTCCAGCCTCCTGCTGCTGTACAAAGACGAGGA
GCGGCTCTGGGGGGAGGCCATGAAGCCGCTGCCCGTGGTGTGCGGCCTGAGGTC
GGTGCAGGTGCCCTGATGCTGAACATGCTGCAGGAGAGCGTGGCGCCCGCGCT
40 GTCCTGCACCCTCTGTTCCATGGAAGGGGACAGCGTGAGCTCCGAGTCTCCTCC
CCGGACGTGCACCTCACCATTGAGGAGGAGGGGGCAGACGAGGAGCTGGAGGA
GACCTCGGAGACGCCCCTCAACGAGAGCAGCGAAGGGTCTCGGAGAACATCCA
TCAGAATTCTAGCACCCCGGGACCCCTGCGGGTGGCTCCCATCAGCCAGCAAC
CTTAGAGAGAGGAAAGACAGTTTTTCAAGTGTCTGGTTTCACTTTCACAGTGCGGC
45 TGCCACTTTGAAGAGACCCTTGGTAAACCCCTGATTCGGGGTGGGGTGGGGGACT
AGGCTCAGCCGGAACCAGCACCTCCAAGGAGTCCGGGAGGTGCCTGTGGTTTAC
ACCCACCACTGAAAAAGCCGCGGAGATGCGCAGCGGTACACTGACTTTGGGGC
CTGGGTGTTGGGGTTCTGATCAGAATTTGGCGGGATGATATGCTTGCCATTTTCTC
ACTGGATGCCCTGGGTAGCTCCTGCAGGGTCTGCCTGTTCCAGGGCTGCCGAAT

GCTTAGGACACGCTGAGAGACTAGTTGTGATTTGCTATTTTGCCTAGAGCTTTGT
CCTTCTAGATCTGATTGGCTGTAAGTATCTCTACTGTGTACCTGTGGCATTCTTC
ACAGTGGGTTACAAGCTTCTTTGGGATTAGAGGGGGATTTTGGATGGGAGAAAG
CGTGGGAGATCGTGGAACCCAGCCCCATTTGCACACTATAAGAAAAAAGTAA
5 CTTTAAACCTGTTAACATTGGCCGGGGTTATAAGAGATGATCTTCTATTT

SEQ ID NO: 664

>21683 BLOOD 444662.14 Z58148 g1029379 Human CpG island DNA genomic MseI
fragment, clone 30a7, forward read cpg30a7.ft1d. 3e-15

10 CTCAGCGTCAGGCAAGTTGGCCTCTCTGTTGTAAATTAGTGGTTAAGGTTATCTA
TTATTGCCACTTTTCCAGCGCTAAAGGCTGTTTTGGAACCAGTGTTGCTTGTTCG
CGGGTGATTGGCTTTTTTTTTTTTGGCAAACCAGTTATTCAAGTTTCTGGTCTTTAA
AAAACCTCTGTGGCGGTACGGTAACCGAGGAGGTTCCAGCGCGGCGGAAGTACCC
CGCGGGTGGGTGTGTGCGCAAGGCCAGGGCCAGAGGGGCACGTGGCGCCGGGA
15 GGAGAGAGAATGCTTTTCGAGGCGGAGGTCGTGGAGGCTTTAATCGAGGTGGT
GGAGGTGGCCGGCTTCAACCGAGGCGGCAGCAGCAACCACTTCCGAGGTGGAGG
CGGCGGTGGAGGCGGCGGCAATTTAGAGGCGGCGGCAGGGGAGGATTTGGAC
GAGGGGGTGGCCGCGGAGGCTTTAACAAGGCCAAGACCAAGGACCTCCAGAA
CGTGTAGTCTTATTAGGAGAGTTCCTGCATCCCTGTGAAGATGACATAGTTTGT
20 AATGTACCACAGATGAAAATAAGGTGCCTTATTTCAATGCTCCTGTTTACTTAGA
AAACAAAGAACAAATTGGAAAAGTGGATGAAATATTTGGACAACCTCAGAGATTT
TTATTTTTCAGTTAAGTTGTCAGAAAACATGAAGGCTTCATCCTTTAAAAAACTA
CAGAAGTTTATATAGACCCATATAAGCTGCTGCCACTGCAGAGGTTTTTACCTC
GACCTCCAGGTGAGAAAGGACCTCCAAGAGGTGGTGGCAGGGGAGGCCGAGGA
25 GGAGGAAGAGGAGGAGGTGGCAGAGGTGGTGGCAGAGGCGGTGGTTTTAGAGG
TGGAAGAGGAGGTGGAGGTGGGGGCTTCAGAGGAGGAAGAGGTGGTGGTTTCA
GAGGGAGAGGACATTAAGTGAAACAGTTGACAGACATCACCAGTTGACTTCTGC
ATTAACCTGCATGATCTGTTTCTACTATGGATTGGAACTTGTTTCTTGAACAAGT
CTTGAAGATCTTGGTCATTTTATGACAATGGATCTAAAATGTCAGCATCATGCAA
30 AGTGCAACGGAATAGTGAATTTTGTCTCTAAAAGAGCATGAACAAGTCTTTCTAAT
GTTTTGTACAGTGCCTGGNACTCTGTGGGTGCTCAATAAATGGATAGGAGTTTTC
ATTTGAAGGATATTTGAATTTTAAAATAAAGTGTTTTATTCCCTTAAAAAAA

SEQ ID NO: 665

35 yp61a02.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:191882 3',
mRNA sequence gi|908298|gb|H38799.1|H38799[908298]
TGATGCATCCTAAAATNNTAAGCTTCAAATCTGATTTGGTATCACCGAGGAAACC
TTGCCCCCATCACTCAGCATTGCACTTAGATACAGAATGAGTTAGATAAACTTGG
CTTGTCTAGAGACCCATGTCATCTTAACCTAAAGGGAAATCTTATTGCGTTATCA
40 TAAAATTGATGATATCTTAGGGTCAGAATTGCCCTTTTTTTTTTATTTTGAATGGGA
AGTTCTCACTAAAACAATCCTGAGATTTCTTAATTTTCATGGGTTCTTTAAATATTA
TAAACACAGAGTCAACATAGGAATGAAATTGTATTTGTTAAAATACACACATTG
GGGGGNCAAGAGGCAGATGACTACTTTTC
GGAGGTAATGCTTGCTCCCTCCNAAAAGGCNGGTTTTCCATCCGGGGG
45

SEQ ID NO: 666

>21694 BLOOD 029567.1 Incyte Unique

GCCACCACACCCAGCTGCTTAAGCACAACTAATTTCAAACCAGTCTTAGAAAT
TATATCCTACGCACTTGTCAAACGGGGTCAGTTTTTCTTGAAAGTAAACCTCTGCT

CTTCATCACACAATCTAAATCTGCCACCCTACCTAAGGCAGGGACTTAAAATGAG
GGGCAGGTTTTCTCAGATAAAATAAGCAAACAGACGAATTGGAATATTTTCGTCTC
AATTCCCATGTACAATTTTCAGCCTCATATGCAAATCAATATGGCAACCATCTCTT
TTTTCTATCAGCAAGAGCCATGTGTTGGTATTAAGAGGCTAGGTTGTAGTTCCCC
5 TCTTGACACCAGAAACACCAGGCCTACTGTTTTGTTTGATAGCCTAGCACAGATG
TAACTCTTCTAAAGGGTAACATTTACTACTACACAGAAAGTCATTTTTAGAATGT
TCCTAGTCCATCCAAGAAAGGCTAAAAAATGTTCTGTGTGATTCTGGACTTAAGA
AGTCTTTTTTCACTGAATTCTGGCCCTAGATGCTCACTCAACTAGTAACCATAATGC
CCTGTTTTTCCCAAATGCTGAAATGGAACATTTACTGCATTGGCAATGTTTTCTAG
10 TGGGATTGGTTACAGAACTGTCATTCATTCTTACTGTGCAATATTACACAGCCA
TAATTAATGATGTAGTTAAAAACATTTGATGGCATATAATATATATATACATTGA
ATACATTGTAAGTAAGAAAATATACAGGTTAGAAAAGTGTAGGTATAGCATATT
GTAAAAAGAAAATATATATACACGCATAGCGAAAAATGTCAGGAAGAATATACC
AAAATGTAAACGATTATCTTTAAGTAGTATCATCTTTTTTACTTCTTGTCTTTCTGT
15 TTCTCCTAAACTTCTAAATAAAAAGGTATTATTTTTCAT

SEQ ID NO: 667

>21697 BLOOD 350207.6 X69086 g34811 Human mRNA for utrophin. 0

GCGGGCAGCAGCAGCCGGCCGCGGGCTTTCTCCCGCCGAGGGGCGAGGAGGAGC
20 CTCTGGCTCCAGAAGCCGATTGGGGAATCACGGGGAGCGGGCGCCCCCTTCTTTT
GGGTCATTTCTGCAAACGGAAAACCTCTGTAGCGTTTGGCAAAGTTGGTGCCTGCN
CGCCCCCTTCCAGGTTTGCCTTTGACTGTTTTGTTTTTGGCGGAACCTACCAGGCAG
GAAGATTGCACAAGTAAGGGGCGTTTTTCAGTCGGGTGTCAANNNNNNNNNNNNNN
NNNNNNNNNNNNNAAAATTTTCGGTTCGTGTCTGCTTCTCCAAGCTTTATTTT
25 TAAAATACATCGCACCCACCAAACCTAACACTCGCACACACCCCCGCGGTTACTCCG
TGTCAAACTCCTAGAGGAGCCCTTGGCCAGCTCGGGGTGCGGCGGTGGCGACCG
GCAGGCGAGGAGGCCCGCGGGCAGCAGGTATTGATGTCAAGCTGAACCATCGTA
GGAAGTTGAAAGCCTTAGAAAGAGGACTTGGTAAAGTTTTTGGATTATCTTGAAA
CTCTGGCAAAATGGCCAAGTATGGAGAACATGAAGCCAGTCCTGACAATGGGCA
30 GAACGAATTCAGTGATATCATTAAAGTCCAGATCTGATGAACACAATGACGTACA
GAAGAAAACCTTTACCAAATGGATAAATGCTCGATTTTCAAAGAGTGGGAAACC
ACCCATCAATGATATGTTTACAGACCTCAAAGATGGAAGGAAGCTATTGGATCTT
CTAGAAGGCCTCACAGGAACATCACTGCCAAAGGAACGTGGTTCCACAAGGGTA
CATGCCTTAAATAACGTCAACAGAGTGCTGCAGGTTTTACATCAGAACAAATGTGG
35 AATTAGTGAATATAGGGGGAACCTGACATTGTGGATGGAAATCACAAACTGACTT
TGGGGTTACTTTGGAGCATCATTTTGCCTGGCAGGTGAAAGATGTCATGAAGGA
TGTCATGTCGGACCTGCAGCAGACGAACAGTGAGAAGATCCTGCTCAGCTGGGT
GCGTCAGACCACCAGGCCCTACAGCCAAGTCAACGTCCTCAACTTCACCACCAGC
TGGACAGATGGACTCGCCTTTAATGCTGTCCTCCACCGACATAAACCTGATCTCT
40 TCAGCTGGGATAAAGTTGTCAAAATGTCACCAATTGAGAGACTTGAACATGCCTT
CAGCAAGGCTCAAACCTTATTTGGGAATTGAAAAGCTGTTAGATCCTGAAGATGTT
GCCGTTTCACTTCTGACAAGAAATCCATAATTATGTATTTAACATCTTTGTTTGA
GGTGCTACCTCAGCAAGTCACCATAGACGCCATCCGTGAGGTAGAGACACTCCC
AAGGAAATATAAAAAAGAATGTGAAGAAGAGGCAATTAATATACAGAGTACAG
45 CGCCTGAGGAGGAGCATGAGAGTCCCCGAGCTGAAACTCCCAGCACTGTCACTG
AGGTCGACATGGATCTGGACAGCTATCAGATTGCGTTGGAGGAAGTGCTGACCT
GGTTGCTTTCTGCTGAGGACACTTTCCAGGAGCAGGATGATATTTCTGATGATGT
TGAAGAAGTCAAAGACCAGTTTGCAACCCATGAAGCTTTTATGATGGAAGTACT
GCACACCAGAGCAGTGTGGGCAGCGTCCTGCAGGCAGGCAACCAACTGATAACA

CAAGGAACTCTGTCAGACGAAGAAGAATTTGAGATTCAGGAACAGATGACCCTG
CTGAATGCTAGATGGGAGGCTCTTAGGGTGGAGAGTATGGACAGACAGTCCCGG
CTGCACGATGTGCTGATGGAAGTGCAGAAGAAGCAACTGCAGCAGCTCTCCGCC
TGGTTAACTCACAGAGGAGCGCATTGAGAAGATGGAACTTGCCCCCTGGAT
5 GATGATGTAAAATCTCTACAAAAGCTGCTAGAAGAACATAAAAGTTTGCAAAGT
GATCTTGAGGCTGAACAGGTGAAAGTAAATTCATACTCACATGGTGGTCATTG
TTGATGAAAACAGTGGTGAGAGCGCTACAGCTATCCTAGAAGACCAAGTTACAGA
AACTTGGTGAGCGCTGGACAGCAGTATGCCGTTGGACTGAAGAACGCTGGAATA
GGTTACAAGAAATCAATATATTGTGGCAGGAATTATTGGAAGAACAGTGCTTGTT
10 GAAAGCTTGTTAAACCGAAAAAGAAGAGGCTTTAAATAAAGTCCAGACAAGCAA
CTTCAAAGACCAAAGGAAGTGTGAGTGTTCGACGTCTGGCTATTTTGAAG
GAAGACATGGAAATGAAGCGTCAAACATTGGATCAGCTGAGTGAGATTGGCCAG
GATGTGGGACAATTACTTGATAATTCCAAGGCATCTAAGAAGATCAACAGTGAC
TCAGAGGAACTGACTCAAAGATGGGATTCTTTGGTTTCAGAGACTAGAAGATTCCT
15 CCAACCAGGTGACTCAGGCTGTAGCAAAGCTGGGGATGTCTCAGATTCCTCAGA
AGGACCTTTTGGAGACTGTTCTGTGAAGAGAACAAAGCAATTACAAAAAATCTA
AGCAGGAACTGCCTCCTCCTCCTCCCCAAAGAAGAGACAGATCCATGTGGATAT
TGAAGCTAAGAAAAAGTTTGATGCTATAAGTGCAGAGCTGTTGAACTGGATTTG
AAATGGAAAACTGCCATTCAGACCACAGAGATAAAAGAGTATATGAAGATGCAA
20 GACACTTCCGAAATGAAAAAGAAGTTGAAGGCATTAGAAAAAGAACAGAGAGA
AAGAATCCCCAGAGCAGATGAATTAACCAAAGTGGACAAATCCTTGTGGAGCA
AATGGGAAAAGAAGGCCTTCTACTGAAGAAATAAAAAATGTTTETGGAGAAGGT
TTCATCAGAATGGAAGAATGTATCTCAACATTTGGAAGATCTAGAAAGAAAGAT
TCAGCTACAGGAAGATATAAATGCTTATTTCAAGCAGCTTGATGAGCTTGAAAAG
25 GTCATCAAGACAAAGGAGGAGTGGGTAACACACTTCCATTTCTGAATCTTCCC
GGCAGTCCTTGCCAAGCTTGAAGGATTCCTGTGACGCGGAATTGACAAATCTTCT
TGGCCTTCACCCCAAATTTGAAATGGCTCGTGCAAGCTGCTCGGCCCTGATGTCT
CAGCCTTCTGCCCCAGATTTTGTCCAGCGGGGCTTCGATAGCTTTCTGGGCCGCT
ACCAAGCTGTACAAGAGGCTGTAGAGGATCGTCAACAACATCTAGAGAATGAAC
30 TGAAGGGCCAACCTGGACATGCATATCTGGAAACATTGAAAACACTGAAAGATG
TGCTAAATGATTGAGAAAATAAGGCCAGGTGTCTCTGAATGTCCTTAATGATCT
TGCCAAGGTGGAGAAGGCCCTGCAAGAAAAAAGACCCTTGATGAAATCCTTGA
GAATCAGAAACCTGCATTACATAAACTTGCAGAAAGAAACAAAGGCTCTGGAGAA
AAATGTTTCATCCTGATGTAGAAAAATTATATAAGCAAGAATTTGATGATGTGCAA
35 GGAAAGTGGAACAAGCTAAAGGTCTTGGTTTCCAAAGATCTACATTTGCTTGAGG
AAATTGCTCTCACACTCAGAGCTTTTGAGGCCGATTCAACAGTCATTGAGAAGTG
GATGGATGGCGTGAAAGACTTCTTAATGAAACAGCAGGCTGCCCAAGGAGACGA
CGCAGGTCTACAGAGGCAGTTAGACCAGTGCTCTGCATTTGTTAATGAAATAGAA
ACAATTGAATCATCTCTGAAAAACATGAAGGAAATAGAGACTAATCTTCGAAGT
40 GGTCCAGTTGCTGGAATAAAAACTTGGGTGCAGACAAGACTAGGTGACTACCAA
ACTCAACTGGAGAACTTAGCAAGGAGATCGCTACTCAAAAAAGTAGGTTGTCT
GAAAGTCAAGAAAAAGCTGCGAACCTGAAGAAAGACTTGGCAGAGATGCAGGA
ATGGATGACCCAGGCCGAGGAAGAATATTTGGAGCGGGATTTTGAGTACAAGTC
ACCAGAAGAGCTTGAGAGTGCTGTGGAAGAGATGAAGAGGGCAAAAGAGGATG
45 TGTTGCAGAAGGAGGTGAGAGTGAAGATTCTCAAGGACAACATCAAGTTATTAG
CTGCCAAGGTGCCCTCTGGTGGCCAGGAGTTGACGTCTGAGCTGAATGTTGTGCT
GGAGAATTACCAACTTCTTTGTAATAGAATTCGAGGAAAGTGCCACACGCTAGA
GGAGGTCTGGTCTTGTGGATTGAACTGCTTCACTATTTGGATCTTGAACTACCT
GGTTAAACACTTTGGAAGAGCGGATGAAGAGCACAGAGGTCCTGCCTGAGAAGA

CGGATGCTGTCAACGAAGCCCTGGAGTCTCTGGAATCTGTTCTGCGCCACCCGGC
AGATAATCGCACCCAGATTTCGAGAGCTTGGCCAGACTCTGATTGATGGGGGGAT
CCTGGATGATATAATCAGTGAGAACTGGAGGCTTTCAACAGCCGATATGAAGA
TCTAAGTCACCTGGCAGAGAGCAAGCAGATTTCTTTGGAAAAGCAACTCCAGGT
5 GCTGCGGGAAACTGACCAGATGCTTCAAGTCTTGCAAGAGAGCTTGGGGGAGCT
GGACAAACAGCTCACCACATACCTGACTGACAGGATAGATGCTTTCCAAGTTCCA
CAGGAAGCTCAGAAAATCCAAGCAGAGATCTCAGCCCATGAGCTAACCCTAGAG
GAGTTGAGAAGAAATATGCGTTCTCAGCCCCTGACCTCCCCAGAGAGTAGGACT
GCCAGAGGAGGAAGTCAGATGGATGTGCTACAGAGGAACTCCGAGAGGTGTCC
10 ACAAAGTTCCAGCTTTTCCAGAAGCCAGCTAACTTCGAGCAGCGCATGCTGGACT
GCAAGCGTGTGCTGGATGGCGTGAAAGCAGAACTTCACGTTCTGGATGTGAAGG
ACGTAGACCCTGACGTCATACAGACGCACCTGGACAAGTGTATGAACTGTATA
AACTTTGAGTGAAGTCAAACCTTGAAAGTGAAACTGTGATTAACACAGGAAGAC
ATATTGTCCAGAAACAGCAAACGGACAACCCAAAAGGGATGGATGAGCAGCTGA
15 CTTCCCTGAAGGTTCTTTACAATGACCTGGGCGCACAGGTGACAGAAGGAAAC
AGGATCTGGAAAGAGCATCACAGTTGGCCCGGAAAATGAAGAAAGAGGCTGCTT
CTCTCTCTGAATGGCTTTCTGCTACTGAACTGAATTGGTACAGAAGTCCACTTC
AGAAGGTCTGCTTGGTGACTTGGATACAGAAATTTCTGGGCTAAAAATGTTCTG
AAGGATCTGGAAAAGAGAAAAGCTGATTTAAATACCATCACAGAGAGTAGTGCT
20 GCCCTGCAAAACTTGATTGAGGGCAGTGAGCCTATTTTAGAAGAGAGGCTCTGC
GTCCTTAACGCTGGGTGGAGCCGAGTTCGTACCTGGACTGAAGATTGGTGCAATA
CCTTGATGAACCATCAGAAACAGCTAGAAATATTTGATGGGAACGTGGCTCACAT
AAGTACCTGGCTTTATCAAGCTGAAGCTCTATGGATGAAATTGAAAAGAAACC
AACAAGTAACAGGAAGAAATTGTGAAGCGTTTAGTATCTGAGCTGGATGATGC
25 CAACCTCCAGGTTGAAAATGTCCGCGATCAAGCCCTTATTTTGATGAATGCCCGT
GGAAGCTCAAGCAGGGAGCTTGTAGAACCAAAGTTAGCTGAGCTGAATAGGAAC
TTTGAAAAGGTGTCTCAACATATCAAAAGTGCCAAATTGCTAATTGCTCAGGAAC
CATTATACCAATGTTTGGTCACCACTGAAACATTTGAAACTGGTGTGCCTTTCTCT
GACTTGGAAAATTAGAAAATGACATAGAAAATATGTTAAAATTTGTGGAAAAA
30 CACTTGGAAATCCAGTGATGAAGATGAAAAGATGGATGAGGAGAGTGCCAGATT
GAGGAAGTTCTACAAAGAGGAGAAGAAATGTTACATCAACCTATGGAAGATAAT
AAAAAAGAAAAGATCCGTTTGCAATTATTACTTTTGCATACTAGATACAACAAA
TTAAGGCAATCCCTATTCAACAGAGGAAAATGGGTCAACTTGCTTCTGGAATTAG
ATCATCACTTCTTCTACAGATTATCTGGTTGAAATTAACAAAATTTTACTTTGCA
35 TGGATGATGTTGAATTATCGCTTAATGTTCCAGAGCTCAACACTGCTATTTACGA
AGACTTCTCTTTTCAGGAAGACTCTCTGAAGAATATCAAAGACCAACTGGACAAA
CTTGGAGAGCAGATTGCAGTCATTCATGAAAAACAGCCAGATGTCATCCTTGAA
GCCTCTGGACCTGAAGCCATTCAGATCAGAGATACACTTACTCAGCTGAATGCAA
AATGGGACAGAATTAATAGAATGTACAGTGATCGGAAAGGTTGTTTTGACAGGG
40 CAATGGAAGAATGGAGACAGTTCCATTGTGACCTTAATGACCTCACACAGTGGA
TAACAGAGGCTGAAGAATTACTGGTTGATACCTGTGCTCCAGGTGGCAGCCTGG
ACTTAGAGAAAGCCAGGATACATCAGCAGGAACTTGAGGTGGGCATCAGCAGCC
ACCAGCCCAGTTTTGCAGCACTAAACCGAACTGGGGATGGGATTGTGCAGAAAC
TCTCCCAGGCAGATGGAAGCTTCTTGAAAGAAAACTGGCAGGTTTAAACCAAC
45 GCTGGGATGCAATTGTTGCAGAAGTGAAGGATAGGCAGCCAAGGCTAAAAGGAG
AAAGTAAGCAGGTGATGAAGTACAGGCATCAGCTAGATGAGATTATCTGTTGGT
TAACAAAGGCTGAGCATGCTATGCAAAAGAGATCAACCACCGAATTGGGAGAAA
ACCTGCAAGAATTAAGAGACTTAACTCAAGAAATGGAAGTACATGCTGAAAAAC
TCAAATGGCTGAATAGAACTGAATTGGAGATGCTTTCAGATAAAAGTCTGAGTTT

ACCTGAAAGGGATAAAATTTTCAGAAAGCTTAAGGACTGTAAATATGACATGGAA
TAAGATTTGCAGAGAGGGTGCCTACCACCCTGAAGGAATGCATCCAGGAGCCCAG
TTCTGTTTCACAGACAAGGATTGCTGCTCATCCTAATGTCCAAAAGGTGGTGCTA
GTATCATCTGCGTCAGATATTCCTGTTTCAGTCTCATCGTACTTCGGAAAATTTCAAT
5 TCCTGCTGATCTTGATAAAACTATAACAGAACTAGCCGACTGGCTGGTATTAATC
GACCAGATGCTGAAGTCCAACATTGTCCTGTTGGGGATGTAGAAGAGATCAAT
AAGACCGTTTCCCGAATGAAAATTACAAAGGCTGACTTAGAACAGCGCCATCCT
CAGCTGGATTATGTTTTTACATTGGCACAGAATTTGAAAAATAAAGCTTCCAGTT
CAGATATGAGAACAGCAATTACAGAAAAATTGGAAAGGGTCAAGAACCAGTGG
10 GATGGCACCCAGCATGGCGTTGAGCTAAGACAGCAGCAGCTTGAGGACATGATT
ATTGACAGTCTTCAGTGGGATGACCATAGGGAGGAGACTGAAGAACTGATGAGA
AAATATGAGGCTCGACTCTATATTCTTCAGCAAGCCCGACGGGATCCACTACCA
AACAAATTTCTGATAACCAAATACTGCTTCAAGAACTGGGTCCTGGAGATGGTAT
CGTCATGGCGTTTCGATAACGTCCTGCAGAAACTCCTGGAGGAATATGGGAGTGA
15 TGACACAAGGAATGTGAAAGAAACACAGAGTACTTAAAAACATCATGGATCAA
TCTCAAACAAAGTATTGCTGACAGACAGAACGCCTTGGAGGCTGAGTGGAGGAC
GGTGCAGGCCTCTCGCAGAGATCTGGAAAACCTCCTGAAGTGGATCCAAGAAGC
AGAGACCACAGTGAATGTGCTTGTGGATGCCTCTCATCGGGAGAATGCTCTTCAG
GATAGTATCTTGGCCAGGGAACCTCAAACAGCAGATGCAGGACATCCAGGCAGAA
20 ATTGATGCCACAATGACATATTTAAAAGCATTGACGGAAACAGGCAGAAAGATG
GTAAAAGCTTTGGGAAATTCTGAAGAGGCTACTATGCTTCAACATCGACTGGATG
ATATGAACCAAAGATGGAATGACTTAAAAGCAAAATCTGCTAGCATCAGGGCCC
ATTTGGAGGCCAGCGCTGAGAAAGTGGAAACAGGTTGCTGATGTCTTAGAAGAAC
TGATCAAATGGCTGAATATGAAAGATGAAGAGCTTAAGAAACAAATGCTATTG
25 GAGGAGATGTTCCAGCCTTACAGCTCCAGTATGACCATTGTAAGGCCCTGAGACG
GGAGTTAAAGGAGAGAAAGAATATTCTGTCTGAATGCTGTGCGACCAGGCCCGAGT
TTTCTTGGCTGATCAGCCAATTGAGGCCCTGAAGAGCCAAGAAGAAACCTACA
ATCAAAAACAGAAATTAATCCTGAGGAGAGAGCCCAAAAGATTGCCAAAGCCAT
GCGCAAAACAGTCTTCTGAAGTCAAAGAAAAATGGGAAAGTCTAAATGCTGTAAC
30 TAGCAATTGGCAAAAGCAAGTGGACAAGGCATTGGAGAACTCAGAGACCTGCA
GGGAGCTATGGATGACCTGGACGCTGACATGAAGGAGGCAGAGTCCGTGCGGAA
TGGCTGGAAGCCCGTGGGAGACTTACTCATTGACTCGCTGCAGGATCACATTGAA
AAAATCATGGCATTTAGAGAAGAAATGCACCAATCAACTTTAAAGTTAAAACGG
TGAATGATTTATCCAGTCAGCTGTCTCCACTTGACCTGCATCCCTCTCTAAAGATG
35 TCTCGCCAGCTAGATGACCTTAATATGCGATGGAAACTTTTACAGGTTTCTGTGG
ATGATCGCCTTAAACAGCTTCAGGAAGCCCACAGAGATTTTGGACCATCCTCTCA
GCATTTTCTCTCTACGTCAGTCCAGCTGCCGTGGCAAAGATCCATTTACATAAT
AAAGTGCCCTATTACATCAACCATCAAACACAGACCACCTGTTGGGACCATCCTA
AAATGACCGAACTCTTTCAATCCCTTGCTGACCTGAATAATGTACGTTTTTCTGCC
40 TACCGTACAGCAATCAAAATCCGAAGACTACAAAAGCACTATGTTTGGATCTCT
TAGAGTTGAGTACAACAAATGAAATTTTCAAACAGCACAAGTTGAACCAAAATG
ACCAGCTCCTCAGTGTTCCAGATGTCATCAACTGTCTGACAACAACCTTATGATGG
ACTTGAGCAAATGCATAAGGACCTGGTCAACGTTCCACTCTGTGTTGATATGTGT
CTCAATTGGTTGCTCAATGTCTATGACACGGGTCGAACTGGAAAAATTAGAGTGC
45 AGAGTCTGAAGATTGGATTAATGTCTCTCTCCAAAGGTCTCTTGGAAGAAAAATA
CAGATATCTCTTTAAGGAAGTTGCAGGGCCAACAGAAATGTGTGACCAGAGGCA
GCTGGGCCTGTTACTTCATGATGCCATCCAGATCCCCCGGCAGCTAGGTGAAGTA
GCAGCTTTTGGAGGCAGTAATATTGAGCCTAGTGTTTCGAGCTGCTTCCAACAGA
ATAACAATAAACAGAAATAAGTGTGAAAGAGTTTATAGATTGGATGCATTTGG

AACCACAGTCCATGGTTTGGCTCCCAGTTTTACATCGAGTGGCAGCAGCGGAGAC
TGCAAAACATCAGGCCAAATGCAACATCTGTAAAGAATGTCCAATTGTCTGGGTTT
AGGTATAGAAGCCTTAAGCATTTTAACTATGATGTCTGCCAGAGTTGTTTCTTTTC
GGGTCGAACAGCAAAAGGTCACAAATTACATTACCCAATGGTGGAATATTGTAT
5 ACCTACAACATCTGGGGAAGATGTACGAGACTTCACAAAGGTAAGTAAACA
GTTTCAAGTTCGAAGAAGTACTTTGCCAAACACCCTCGACTTGGTTACCTGCCTGTC
CAGACAGTTCTTGAAGGTGACAACTTAGAGACTCCTATCACACTCATCAGTATGT
GGCCAGAGCACTATGACCCCTCACAACTCTCCTCAACTGTTTCATGATGACACCCA
TTCAAGAATAGAACAAATATGCCACACGACTGGCCCAGATGGAAAGGACTAATGG
10 GTCTTTTCTCACTGATAGCAGCTCCACCACAGGAAGTGTGGAAGACGAGCAGGCC
CTCATCCAGCAGTATTGCCAAACACTCGGAGGAGAGTCCCCAGTGAGCCAGCCG
CAGAGCCCAGCTCAGATCCTGAAGTCAGTAGAGAGGGAAGAACGTGGAGAACTG
GAGAGGATCATTGCTGACCTGGAGGAAGAACAAAGAAATCTACAGGTGGAGTAT
GAGCAGCTGAAGGACCAGCACCTCCGAAGGGGGCTCCCTGTCGGTTCACCGCCA
15 GAGTCGATTATATCTCCCCATCACACGTCTGAGGATTCAGAACTTATAGCAGAAG
CAAACTCCTCAGGCAGCACAAAGGTTCGGCTGGAGGCTAGGATGCAGATTTTAG
AAGATCACATAAACAGCTGGAGTCTCAGCTCCACCGCCTCCGACAGCTGCTGG
AGCAGCCTGAATCTGATTCCCGAATCAATGGTGTTCCTCCATGGGCTTCTCCTCA
GCATTCTGCACTGAGCTACTCGCTTGATCCAGATGCCTCCGGCCCACAGTTCCAC
20 CAGGCAGCGGGAGAGGACCTGCTGGCCCCACCGCACGACACCAGCACGGATCTC
ACGGAGGTCATGGAGCAGATTCACAGCACGTTTCCATCTTGCTGCCCAAATGTTC
CCAGGAGGCCACAGGCAATGTGAAGTATTCATCCGGCCAACCAATGTTCTCTGAG
GTACAGTGTTCGCTTTTTCAGCAAAATGCCAATTCGAAGTTCCATTAAATCAGAAG
CTCCATGGCTCTTGGGCCACGATGTTGAGTGCTGACTGTGTGTTCTACTGAAAG
25 AGTAAAACACTGACTATCCAAAGAGAAATGGATATTTTGTTCCTTATAATAACCAT
ATATTATTGTTTTCTTCTTCCCTTTCTATGCAAGTGTAAATTAATGAACAGAGAGG
TATTTGGAAATGGTAATACATTTGTACGGATTTGTATAATGTATACAGCATTGG
GAAAGTGGGTGGGGGCTTTCTAATATGATACCGTCTTTTAAATAACTATGACAAA
GCTTACATAAGAATTAGAAGACCACTTTACATTTTACATTCTTCTGCTGTTTAT
30 ATTAACCTTGCACAATTACTTCATTTTTTCTTTGACTCTTTTACCACAATGTTTTGG
TTATTTATAATTTATCAGCCATATGTTTATCAGCCATATAACCAACTAGATCCCAA
ATAGATCCATGTATTTGTTTCCGTGATTTGGCCACATTAATAAATTCATAAATTC
AATCAAATATCATATATATACACACATATGGTTTAAGCTACAGCCCTGTGTATGC
CGTTTAACTTTATTTGACGTTGCCCACTTACTTCTTTGCTGACCACTTGGATAACC
35 GTAATAAAAATCCTATAAGCCTAAATGGCATTCTTTTGGGATATTTTTCCTGCAT
TTTATTCCCTTTTTATATAAGTAGGAATTAATTATTTATTTTATGTCTTAATCTATT
TGATAAAGAAGACTACATTATAATAATCTCAAAGATCATATTACCAAAGGTTGCC
CACTTGAGCATATTTTCATTTTGACACAGAAACAAAATTTAGTACAACCTTTCT
AGTTCCCATGTCTTGATTTTCATCATTACATGCACAGCAGACCTTTACCTATTGTG
40 ATACCAGAACACATCATTGTCTTTGGTTCCCTTCAAAGAGAATTTTATTGTTGTTT
TGTATTTTCAAGTCCTTAATAGTTCTTGAAACTCCTAGTTGTTTCTTGTTGAAAG
CAGACACACATTTAGTGCACGGCTTATTTTACCTTTTCGGGTGAAAGATCAGATGT
TTTTATAACCCTTCACTTGATCAATATATTTGGAAAGAATGTTTATCAAAAGTCTAT
GTCAGTCTTCTACAGAAGAATGAAATTAATGCTTAGGTTGATGGTACCTCCACCT
45 ACATCTTTTGGAGTGCATTCAATTATGTATTTTGGTTTAGCTTCTGATTTAACATTT
AATTGATTCAAGTTTAAACATGTTACTTAATTAGCAAATGTAGAGGAACCAAAAAA
AGGTGAAAATAATATGTTTTGATTCAAACCTAAAGACATAAAAAACATAAAGACA
TTTTAACTTTGGGTTCTCTTTAGCTGGGATCTGGCCAGAAGGAGGCTTAAAGTTA
GAAATTGCTATTATTTTAGAATAGGTTGGGTGGGTGGGGGGCAAGGGTGTCTAT

TTGCAGCAGAGATATTTTGAAGAAGAAAATTGTTTTATATAAAAAGGAAAGC
 CATGACCACCTTTCTACCTCAGATCCATCTTCATCCATTGCATTGGAACTGCTTT
 ATGCTGCTGCAGTCTGCAAAGTCTAGAGCTTTTATCAGGCCATGTCATACCCAAG
 AAAGCACCTATTTAAAGAAAAACAATTCCTGAGCTCTCAACTCCAAGTTGTAG
 5 ATTTGGTGTCTTCCTTGTTCTTACTTTAAAAAGTCATGTGTTAATTTTTTTCTGCC
 TGTATTTGTATGCAAAATGTCCTCTATCTGCTATTAAAGAAAAGCTACGTA AAC
 ACTACATTGTAACCTTCTAAGTAATAATAAATAAAAAGAAATATATTGCAGTAAC
 AATGGGAAGTAAGTATGTAGTTCTTTTGAATATGTGGTAAGAAGTAATCACAG
 ACTATCATCTAATCTGGTTACATATTGTATTTTTTCATCCTGTGATTAAAAGGCACA
 10 TGTGTAAAAGTCCAATTAGTATGCTTTTCATTTCAAATAATCCATATAGCCTCCAG
 AAAAATATGCACATGTGTAAAAGTCCACGTTTCTTTCACTTCCAATATAAA
 GTATTCTGTATTTTGTATAAAGTACGTGCAAACACCTTTCTGCTAATCGGGTCCCC
 ACATTCTTTTCACTACAGGTACTTTACAAGTCTGCCCTCTGCTCAAACACTAACCG
 TGCCTGACATCCTCCTTCCCTAGACAGCCATTCTCTCCCGGACTTCTTTCTCTCA
 15 GACATCCTCCTGACCTCCTGACCTCCCTGACCTGCTTCACCACTGTGTTACCTCA
 CTGGTTACTTGTACAGCAAAGTATGCAACTACTAGTCTACCTGGACAACATAT
 TAAACAGGTATCACCTAATAGGGTGGCAGCCTATCGGGGTGATTCTTGGCGAAT
 ACACAGTAACCAACCACATACTGACACACTCAACCCATTGCTACAGATGGACCC
 AACTAATTGATATGACAATCCTTTATTCACTCGGCACATTTGGTTTCTTTGCATT
 20 TTCTTCCATTTTACATTGCAGGTGTGGCTACCAAGAGCTGGATAACGAGTCCCTC
 AAACAAAGTTTGGAATTGCGAGATATATTGGGGTACCTTGATTCTTGAGACAGTT
 GAATTCCTTCTAGTTGATCTTGTGTTATTA AAAAGTCACTCTCAACTGAAGTGACC
 ACTGCATTTCTTTGTAAAAGGTCATTTGACTGGCTTTTCTCTACAACTGCGACC
 GATGGAGTACAAAAGCAGGAATCCCTTTTCATGAAAGGTGTAAGTACAAGATG
 25 ACATTTACATTTTTTTTTAAAAAAGAATCCTTCATGGGAATATATCCTAATAATC
 AATTATATGGAGACAGTTTTATGTACACCAAATTTCTGCAACTTTATAATAATGA
 AAATTAGAAACAACCTAAATAGTTAACAACATGGGAATGGTTAAATAAACTGAG
 TTGCATCCATTAAATGGAATATAATATAGCCATTAAAATTATGTTTTTGTAAAATT
 TTTAATGCCATAAGAAAATGTGGCAATTTTGAATGAAAAAGATCTACTTATAAA
 30 ACTGTTTACAGTATGACTCCAATTATGTAAAAAAGTATAACAATACACATATAGG
 CATAATGGGGGTTGCTTTTTTAAAGGTGGTTACTTCTGGGTTGTGATATTATCAGT
 AATCATTTTTTGCTTTTTTATACATTTCTGTATTTTTTCAAGTTTTCTATGATGAGTAT
 ATTATTTTACAAAGACTACGAAAATTTTCTCTGATATACTGGTAATTAGAATGT
 ACTTGGGTATTTTAAATATATGGGAACAATATTATAGTGCTTCATCTTCTATGACT
 35 TTTTTGGAATACATATCACTTTGGTAATAAACTTACATTCCCTGTTTTATACTTGT
 TACAACATTTTAATTAAACAGTTAATATTGTGATTAGAGCATTGTTTGCTTCATGA
 CCTAAACAAATACTGGCTTTGAAGTCTAGGTTCTATTTCTCTAGAAGATTTAACAT
 TAGTATCCTTTTAATCTTTTTTAAAGTAAGGCATACTGCATACATACATTACATGCAT
 GCTTTCTAAACAAAAGATAATTCCAAGTTTACAGTTTTCTCTATGTAAGGGAAAAAA
 40 TGGAATTATGGTAGTTTAAAAGCAGTCCATAGTCTCATCCATCACAAACATGCTG
 ATAGGCATAAACGTGTTTATTAAGTGAAACGTATCCTTTAAAAATAAAAAAGGG
 AAGCCTGTATATAAATGAAGTTGTGGATTCAACTAGCCAGAATTTATTCTGACTT
 GCACCAAAACCACACAAAATCTTTTAAAAGTCTAGTTAGTGTAGTCTAAATGGACA
 CTCCAGAGTCTGTTCTTGAATTCCATTGCAAGAGCTCCAAGTTCTTCTACTTTCAGAA
 45 GGGATGGGGATCAAGATGAGGGTTGTACATAAGCTAATTTTCAATATATATCAA
 GTCTTGTGGGGTCCAGGAACAAATACTGTCATTGGTTAGTGTTTAAGTACATGAG
 TTGACTTTTCTCCTCTCTCACACCCACCTTGCCCTGGCAATTGGGTAGGGGGAG
 GCTGTTTATCCTCCAAGAGAGGACGGCTGGTTCTCATCTCAGTTTCCGTTCTAAA
 CCACAGAGTGGTCATTGCTGTGAAGTCCAGCCAAGATGGTGTGGGAGAGGCGAG

GAAGCCGAGCGGTCTGAGCCTTCTGTGGGGCCGGTGGGGTTCTCACTGCGCTGGC
 AGCAGAGGATCTGCCTAAAGGTGGCGCTCATTTCTTTGTCGCGGTAGGAGTAAAT
 GATGGGGTTCATGGCAGAGTTGAATTCAGCAAGGAGAAGGAAGAATTTCTCATA
 GGCCAGCACGTCGCACTGTGGACAGCACACGTCTAGAAGTAACAAAACCAATCC
 5 AGGAGTCCAGCAGATGATAAAGGCCCAAGCACAATGACCACAGTCTTCAGAAG
 ACTCATCATGGTATCCCGATTCCGCCGGGGTCCAGAACTATGCCGAGACATTCTC
 ATAGTCCTCTGGCGAACATAGCCAAAGATGTGAGCATAGAGAACCACCATTACC
 ACAAAGGTCACCAAGTTGAAAATGGCCCAGAAGACTAAGTAAGAGTCACTGTAG
 AGGGGTGCCATGTTGGAACAATTTTCAATATCACAGATACAGTTCAGCCACAC
 10 TGGGTATAGCACCCATAACGATGGCCATAGTCCAGATGACCACAATGACCACCA
 CTACCCGCCGGTTGCTCATCCGTGTGTGGAGCTGCATGCGGAAAACCGTAATGTG
 CCTCTCGATTGCAATAGCCAGTAAGTTGGCCACAGATGCCGTCAGGCTGGTGTCA
 ATGAGGCCCTGACGAAGGAGCCATGTGCTAACAGTCAGTCTCCGAGTATTGGGT
 CCTGTGTTGAACATGAGATAGAAGTAGGCCAACCCAGCAAAGAAGTCTGCAGCA
 15 GCCAGATTAGCCATTAGGTAATAAATAGGAAAATGGAAGCGGCGGTTGACATAG
 ATTGCCACCATGACCAATAGGTTGGCCAACATGATGAAGATACAAACAGTGATT
 CCAAGTCCCATCACCAGCTTGCTGACTGTGTTCCATTCTGTGGCAAGATGCTTTCC
 ACTTCGGTTATAAAAGAAGGCAATGGACTCGTTGTAGAAGCACTGTGGTTCATT
 ATGGCTGTGAACTGGGGCTGTGAAATTACAGGGATGGAAGTAGAGATGGCAGCC
 20 ATGACAGCTCTGTGGTTGTAGGTGGTGAACACGCCCCAGAACTACGGGAGACAA
 ATTTTCTTGTTTGCTGATCAGATCGAAGTCATGCTAGGAGAAGCTGTGTACCTGA
 TGTGTAGGTGTGAGTCTCTGAGAAGTCAGGTAAGTCTAGATAGGTGGATGGGGAGC
 TTTTTCATAAATCAGACGCTCCACCTCTGTTAGTTCTTTCCCATCACTCACAGGGAGACT
 TTTTTCAGAAATCCATGCTGAGTGGCCAGAGACCTGGGCAGGAGCTGTTCCCCCAGCGCGG
 25 GACAGCTGGCAGGACTCCGGTGGACGCCCCGGGACGGGGCATTTCACGTTGTC
 GCTCTCCTCTTCCCACTTGAAAAGCTCTGGAAAACATCGCGGGGGCCCGCAAAACC
 CCGGAAATGTGGC

SEQ ID NO: 668

30 >21707 BLOOD 1147849.1 J03004 g183181 Human guanine nucleotide-binding regulatory
 protein (G) alpha-inhibitory-subunit mRNA, complete cds. 5e-78
 GCTGCACCGTGAGCGCCGAGGACAAGGCGGCGGCCGAGCGCTCTAAGATGATCG
 ACAAGAACCTGCGGGAGGACGGAGAGAAGGCGGCGGGAGGTGAAGTTGCTG
 CTGTTGGGTGCTGGGGAGTCAGGGAAGAGCACCATCGTNAAGCAGGTTAGGTCA
 35 TTNCCGGGGTGTGTTATTTCCGGGGGGATTTCNCNAATACCCNGGGTTNTCTACAG
 CAACANCATCCAGTCCATCATGGCCATTGTCAAAGCCATGGGCAACCTGCAGATC
 GACTTTGCCGACCCCTCC

SEQ ID NO: 669

40 >25177 BLOOD Hs.227948 gnl|UG|Hs#S553844 squamous cell carcinoma antigen=serine
 protease inhibitor [human, mRNA, 1711 nt] /cds=(61,1233) /gb=S66896 /gi=239551
 /ug=Hs.227948 /len=1711
 CTCTCTGCCCACCTCTGCTTCTCTAGGAACACAGGAGTTCCAGATCACATCGAG
 TTCACCATGAATTCAGTCAAGCCAACACCAAGTTCATGTTGACCTGTTCC
 45 AACAGTTCAGAAAATCAAAAGAGAACAACATCTTCTATTCCCCTATCAGCATCAC
 ATCAGCATTAGGGATGGTCTCTTAGGAGCCAAAGACAACACTGCACAACAGAT
 TAAGAAGGTTCTTCACTTTGATCAAGTCACAGAGAACACCACAGGAAAAGCTGC
 AACATATCATGTTGATAGGTCAGGAAATGTTTCATCACCAGTTTCAAAAGCTTCTG
 ACTGAATTCAACAAATCCACTGATGCATATGAGCTGAAGATCGCCAACAAGCTCT

TCGGAGAAAAACGTATCTATTTTTACAGGAATATTTAGATGCCATCAAGAAATT
 TTACCAGACCAGTGTGGAATCTGTTGATTTTGCAAATGCTCCAGAAGAAAGTCGA
 AAGAAGATTAACTCCTGGGTGGAAAGTCAAACGAATGAAAAAATTAACCTA
 ATTCCTGAAGGTAATATTGGCAGCAATACCACATTGGTTCTTGTGAACGCAATCT
 5 ATTTCAAAGGGCAGTGGGAGAAGAAATTTAATAAAGAAGATACTAAAGAGGAA
 AAATTTTGGCCAAACAAGAATACATACAAGTCCATACAGATGATGAGGCAATAC
 ACATCTTTTCATTTTGCCTCGCTGGAGGATGTACAGGCCAAGGTCCTGGAAATAC
 CATACAAAGGCCAAAGATCTAAGCATGATTGTGTTGCTGCCAAATGAAATCGATG
 GTCTCCAGAAGCTTGAAGAGAACTCACTGCTGAGAAATTGATGGAATGGACAA
 10 GTTTGCAGAATATGAGAGAGACACGTGTCGATTTACACTTACCTCGGTTCAAAGT
 GGAAGAGAGCTATGACCTCAAGGACACGTTGAGAACCATGGGAATGGTGGATAT
 CTTCAATGGGGATGCAGACCTCTCAGGCATGACCGGGAGCCGCGGTCTCGTGCTA
 TCTGGAGTCCTACACAAGGCCTTTGTGGAGGTTACAGAGGAGGGAGCAGAAGCT
 GCAGCTGCCACCGCTGTAGTAGGATTCCGGATCATCACCTGCTTCAACTAATGAAG
 15 AGTTCCATTGTAATCACCTTTCTTCTATTCATAAGGCAAAATAAGACCAACAG
 CATCCTCTTCTATGGCAGATTCTCATCCCCGTAGATGCAATTAGTCTGTCACTCCA
 TTTGGAAAATGTTACCTGCAGATGTTCTGGTAACTGATTGCTGGCAACAACAG
 ATTCTCTTGGCTCATATTTCTTTTCTTCTCATCTTGATGATGATCGTCATCATCAA
 GAATTTAATGATTAAAATAGCATGCCTTTCTCTCTTTCTCTTAATAAGCCACATA
 20 TAAATGTACTTTTTCTTCCAGAAAAATTCTCCTTGAGGAAAAATGTCCAAAATAA
 GATGAATCACTTAATACCGTATCTTCTAAATTTGAAATATAATTCTGTTTGTGACC
 TGTTTTAAATGAACCAAACCAAATCATACTTTTCTTTGAATTTAGCAACCTAGA
 AACACACATTTCTTTGAATTTAGGTGATACCTAAATCCTTCTTATGTTTCTAAATE
 TTGTGATTCTATAAAACACATCATCAATAAAATAGTGACATAAAATCAAAAAAA
 25 AAAAAAAAAA

SEQ ID NO: 670

yc03e09.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:79624 3', mRNA
 sequence gi|666284|gb|T62627.1|T62627[666284]

30 TTTAGANACATTTGCTTNCCCATCCCAAATTAAGTATGCAAATTAATTGTTTTGAA
 GATGCCATNCCAAATGTGGAGGTGCTCATGAGCTTGGAAACTCAGAAGCTCTAA
 GGTGAGCCTCCAGACAGGGAGAGTCTGCAACATGGTGACTGAGAGGGTAGTAGA
 AATTCACCTTGCTATNAACTCTCTCTNGAGATTTATTCTTGGAGGACAGAGCAAA
 AGTCCACTCTTCAGCAGCTCTCCGAGGGTCATTCTTCACAACGTATATTCCGTTT
 35 CCAGTTCTTTGCGTTCCCTTCTTTCTTCTCGACTTCAAATTCATTTGGTGTAAACCA
 AGTTCCATCCTCATTCCNGAATGCACTTCACTGAGGATCCCGTGTTTCATTTTCTT
 CTTATATAAAANCCCTTTTCGCCTCACACAGGTCACGGGGGAGCTTNGGAACAGT
 GAAAATCCACAGTGTCACTTTTGGGGTTTTCTCTTCGGGTGAATATTTTCTGAA
 ATCTCCTTTTTGAGCTTGGACAGATATCTTGNTCCTTTGNCT

40

SEQ ID NO: 671

ys88a08.s1 Soares retina N2b5HR Homo sapiens cDNA clone IMAGE:221846 3' similar to
 SP:HTLF_HUMAN P32314 HUMAN T-CELL LEUKEMIA VIRUS ENHANCER

FACTOR ;contains MER22 repetitive element ;; mRNA sequence

45 gi|1064703|gb|H84982.1|H84982[1064703]
 GCTCCCCAGTGGTCAGCGGAGACCCCAAGGAGGATCACAACTACAGCAGTGCCA
 AGTCCTCCAACGCCCGGAGCACCTCGCCCACCAGCGACTCCATCTCCTCCTCCTC
 CTCCTCAGCCGACGACCACTATGAGTTTGCCACCAAGGGGAGCCAGGAGGGCAG
 CGAGGGCAGCGAGGGGAGCTTCCGGAGCCACGAGAGCCCCAGCGACACGGAAG

AGGACGACAGGAAGNACAGCCAGAAGGAGCCCAAGGATTTTTTNGGGGACAGC
GGGTACGATTNCC

SEQ ID NO: 672

5 yq55b04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:199663 5'
similar to SP:SISD_HUMAN P13501 T-CELL SPECIFIC RANTES PROTEIN
PRECURSOR ;, mRNA sequence gi|982328|gb|R96668.1|R96668[982328]
NCGCCCAGGAGTCCTCGGCCAGCCCTGCCTGCCCACCAGGAGGATGAAGGTCTC
CGTGGCTGCCCTCTCCTGCCTCATGCTTGTTGCTGTCCTTGGATCCCAGGCCCAGT
10 TCACAAATGATGCAGAGACAGAGTTAATGATGTCAAAGCTTCCACTGGAAAATC
CAGTAGTTCTGAACAGCTTTCACTTTGCTGCTGACTGCTGCACCTCCTACATCTCA
CAAAGCATCCCGTGTTCACCTCATGAAAAGTTATTTTGAAACGAGCAGCGAGTGCT
CCAAGCCAGGGTGTCAATTCCTCACCAAGAAGGGGCGGCAAGTCTGTGCCAAA
CCCAGTGGGTCCGGGAGTTCAGGATTGGCATGGAAAAAGCTTNAAGCCCTAATT
15 CAATATTANTAATTAAAGGAGGACANAAGAGGGCCAGCNCACCCACCTCCAACA
CTTCNTGAGGCTTTGGAAGG

SEQ ID NO: 673

20 zt20b07.s1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:713653 3'
similar to TR:G577291 G577291 MRNA ;contains element MER28 repetitive element ;,
mRNA sequence
gi|1928812|gb|AA284495.1|AA284495[1928812]
CCGCCTCCTTTGECGGGGTACACCTGGCCCAAGAGACCTTCAGCACCTGTCGA
CTTCTCAAAGATAGACCGGGGCATAGCCTGAAAGCATATTGAAAATGACGAAAA
25 AAGGGAAGACTCTCATGATGTTTGTCACTGTATCAGGAAGCCCTACTGAGAAGG
AGACAGAGGAAATTACGAGCCTCTGGGAGGGCAGCCTTTTCAATGCCAACTATG
ACGTCCAGAGGTTTATTGTGGGATCAGACCGTGTCTATCTTCATGCTTCGCGATGG
GAGCTACGCCTGGGAGATCAAGGACTTTTTGGTCTGGTCAAGACAGGTGTGCTGAT
GTA ACTCTGGAGGGCCAGGTGTACCCCGGCCAA GGAGGAGGAA

30

SEQ ID NO: 674

>L01639

CGCATCTGGAGAACCAGCGGTTACCATGGAGGGGATCAGTATATACACTTCAGA
TAACTACACCGAGGAAATGGGCTCAGGGGACTATGACTCCATGAAGGAACCCTG
35 TTTCCGTGAAGAAAATGCTAATTTCAATAAAATCTTCCTGCCCACCATCTACTCC
ATCATCTTCTTA ACTGGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGTT
ACCAGAAGAACTGAGAAGCATGACGGACAAGTACAGGCTGCACCTGTCAAGTGG
CCGACCTCCTCTTTGTACACGCTTCCCTTCTGGGCAGTTGATGCCGTGGCAAACCT
GGTACTTTGGGAACTTCCTATGCAAGGCAGTCCATGTCATCTACACAGTCAACCT
40 CTACAGCAGTGTCTCATCCTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATC
GTCCACGCCACCAACAGTCAGAGGCCAAGGAAGCTGTTGGCTGAAAAGGTGGTC
TATGTTGGCGTCTGGATCCCTGCCCTCCTGCTGACTATTCCCGACTTCATCTTTGC
CAACGTCAAGTGAAGCAGATGACAGATATATCTGTGACCGCTTCTACCCCAATGAC
TTGTGGGTGGTTGTGTTCCAGTTTCAGCACATCATGGTTGGCCTTATCCTGCCTGG
45 TATTGTCATCCTGTCCTGCTATTGCATTATCATCTCCAAGCTGTCACACTCCAAGG
GCCACCAGAAGCGCAAGGCCCTCAAGACCACAGTCATCCTCATCCTGGCTTTCTT
CGCCTGTTGGCTGCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGG
AAATCATCAAGCAAGGGTGTGAGTTTGAGAACACTGTGCACAAGTGGATTTC
TCACCGAGGCCCTAGCTTTCTTCCACTGTTGTCTGAACCCCATCCTCTATGCTTTC

CTTGGAGCCAAATTTAAAACCTCTGCCCAGCACGCACTCACCTCTGTGAGCAGAG
 GGTCCAGCCTCAAGATCCTCTCCAAAGGAAAGCGAGGTGGACATTTCATCTGTTTC
 CACTGAGTCTGAGTCTTCAAGTTTTCTACTCCAGCTAACACAGATGTAAAAGACTT
 TTTTTTTATACGATAAATAACTTTTTTTTAAAGTTACACATTTTTTCAGATATAAAAG
 5 ACTGACCAATATTGTACAGTTTTTATTGCTTGTTGGATTTTTGTCTTGTGTTTCTTT
 AGTTTTTGTG

SEQ ID NO: 675

> Human tumor necrosis factor receptor 2 (TNFR2) gene, exon 10 and complete cds

10 gi|1469539|gb|U52165.1|HSTNFR2S10[1469539]
 TCTTGGTCTCGGCTCCTGGCCCAGTGCTCTTTCCCATGTGTCTGAATCTGCATCTT
 GGGCAGGGGTCCCTGGGCCCCACTCCTGGACCCCCGGACTGACCCCCACCCCATC
 TTGTGCTTAGCAGATTCTTCCCCTGGTGGCCATGGGACCCAGGTCAATGTCACCT
 GCATCGTGAACGTCTGTAGCAGCTCTGACCACAGCTCACAGTGCTCCTCCCAAGC
 15 CAGCTCCACAATGGGAGACACAGATTCCAGCCCCTCGGAGTCCCCGAAGGACGA
 GCAGGTCCCCTTCTCCAAGGAGGAATGTGCCTTTCGGTCACAGCTGGAGACGCCA
 GAGACCCTGCTGGGGAGCACCGAAGAGAAGCCCCCTGCCCCCTGGAGTGCCTGAT
 GCTGGGATGAAGCCCAGTTAACCAGGCCGGTGTGGGCTGTGTCTAGCCAAGGT
 GGGCTGAGCCCTGGCAGGATGACCCTGCGAAGGGGCCCTGGTCCTTCCAGGCCC
 20 CCACCACTAGGACTCTGAGGCTCTTCTGGGCCAAGTTCCTCTAGTGCCCTCCAC
 AGCCGCAGCCTCCCTCTGACCTGCAGGCCAAGAGCAGAGGCAGCGAGTTGGGGA
 TTTTAAAGCCTCTGCTGCCATGGTGTGTCCCTCTCGGAAGGCTGGCTGGGCATGGACGTT
 TCGGGGATGCTGGGGCAAGTCCCTGACTCTCTGTGACCTGCCCCGCCCCAGCTGCA
 TCTGCTGCCAGCCTGGCTTCTGGAGCCCTGGGGTTTTTTTGTGTTGTTGTTGTTGTTG
 25 TTTGTTTCTCCCCCTGGGCTCTGCCCAGCTCTGGCTTCCAGAAAACCCCAGCATCC
 TTTTCTGCAGAGGGGCTTTCTGGAGAGGAGGGATGCTGCCTGAGTCACCCATGAA
 GACAGGACAGTGCTTCAGCCTGAGGCTGAGACTGCGGGATGGTCCTGGGGCTCT
 GTGTAGGGAGGAGGTGGCAGCCCTGTAGGGAACGGGGTCCTTCAAGTTAGCTCA
 GGAGGCTTGGAAGCATCACCTCAGGCCAGGTGCAGTGGCTCACGCCTATGATC
 30 CCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCTGAGGTTAGGAGTTCGAGA
 CCAGCCTGGCCAACATGGTAAAACCCCATCTCTACTAAAAATACAGAAATTAGC
 CGGGCGTGGTGGCGGGCACCTATAGTCCCAGCTACTCAGAAGCCTGAGGCTGGG
 AAATCGTTTGAACCCGGGAAGCGGAGGTTGCAGGGAGCCGAGATCACGCCACTG
 CACTCCAGCCTGGGCGACAGAGCGAGAGTCTGTCTCAAAAGAAAAAAAAAAAAA
 35 GCACCGCCTCCAAATGCTAACTTGTCTTTTGTACCATGGTGTGAAAGTCAGATG
 CCCAGAGGGCCCAGGCAGGCCACCATATTCAGTGCTGTGGCCTGGGCAAGATAA
 CGCACTTCTAACTAGAAATCTGCCAATTTTTTAAAAAAGTAAGTACCACTCAGGC
 CAACAAGCCAACGACAAAGCCAAACTCTGCCAGCCACATCCAACCCCCCACCTG
 CCATTTGCACCCCTCCGCCTTCACTCCGGTGTGCCTGCAGCCCCGCGCCTCCTTCCT
 40 TGCTGTCTTAGGCCACACCATCTCCTTTCAGGGAATTTAGGAACTAGAGATGAC
 TGAGTCCTCGTAGCCATCTCTCTACTCCTACCTCAGCCTAGACCCTCCTCCTCCCC
 CAGAGGGGTGGGTTCCTCTTCCCCACTCCCCACCTTCAATTCCTGGGCCCCAAAC
 GGGCTGCCCTGCCACTTTGGTACATGGCCAGTGTGATCCCAAGTGCCAGTCTTGT
 GTCTGCGTCTGTGTTGCGTGTCTGGGTGTGTGTAGCCAAGGTCGGTAAGTTGAA
 45 TGGCCTGCCTTGAAGCCACTGAAGCTGGGATTCTCCCCATTAGAGTCAGCCTTC
 CCCCTCCCAGGGCCAGGGCCCTGCAGAGGGGAAACCAGTGTAGCCTTGCCCGGA
 TTCTGGGAGGAAGCAGGTTGAGGGGCTCCTGGAAAGGCTCAGTCTCAGGAGCAT
 GGGGATAAAGGAGAAGGCATGAAATTGTCTAGCAGAGCAGGGGCAGGGTGATA
 AATTGTTGATAAATTCCACTGGACTTGAGCTTGGCAGCTGAACTATTGGAGGGTG

GGAGAGCCCAGCCATTACCATGGAGACAAGAAGGGTTTTCCACCCTGGAATCAA
GATGTCAGACTGGCTGGCTGCAGTGACGTGCACCTGTACTCAGGAGGCTGAGGG
GAGGATCACTGGAGCCCAGGAGTTTGAGGCTGCAGCGAGCTATGATCGCGCCAC
TACACTCCAGCCTGAGCAACAGAGTGAGACCCTGTCTCTTAAAGAAAAAAAAAAG
5 TCAGACTGCTGGGACTGGCCAGGTTTCTGCCACATTGGACCCACATGAGGACAT
GATGGAGCGCACCTGCCCCCTGGTGGACAGTCCTGGGAGAACCTCAGGCTTCCTT
GGCATCACAGGGCAGAGCCGGGAAGCGATGAATTTGGAGACTCTGTGGGGCCTT
GGTTCCCTTGTGTGTGTGTGTGATCCCAAGACAATGAAAGTTTGCATGTATGC
TGGACGGCATTCTGCTTATCAATAAACCTGTTTGTTTAAAAAAA

10

SEQ ID NO: 676

>R88734

ANNTNANATTCCATTGAAGGTATTATTTATTTGCAGCTCATCTTAAGTGACAAAA
TTCCATACAGAAGACTATAACAGAAATCATATTTAATATATTAATAATACTT
15 CAAATATCTTTCACATTANGATGATTATCTATTGTGTAAATCTTTCCTAGGTATGT
GTGTCTGTTTCTTGATGTGTAAACCAAACCTCTGAAATATTCTCTTGATCTAACTT
TGACTTTTAAAAACTGACATTGTATTGAATTTACATAATTCTCAATCAGAAAAAA
AATTACTGTCAGACTGCAATGCA AGTCTGCCCCAATGAAGGCCG

20 SEQ ID NO: 677

>AA418689

ATGAAAGTTGAATATTTTATTATTTACACATATAAAGTGAGAATGAAAATTGGGCA
TGGGGCAAGGGCAGGAAGATGACTCCAGCTCAGTCGGTGATGATGAGCTCGTCC
ACCCCCAGTCTTCATAGCTCCCATCTGGCAGGTAACGGCGAATGATGATGGGGA
25 TCTTTCGGGCCTTGAGTTCCTTCATGGCAATGAGCAGAGGATCTGTCTCCCCCTCC
AGCTCCACCATCACAGGGGCACACATCGCAATCTGGAGCGCTCGGGTGCCCAGC
ACGCGGGCTCGCTCGTACTTGGTCATGTATGGTGTGGTGATTCTGCTTCTGGTTGG
CCTGCGGTCTGCTCCCCAGAGGAGGNAGTCTCGACATTCTCCTGGCCTTCCTCTTC
GGCATTCTCCAAGTCATCTAGCCCTTCATCCTCCTC

30 CACATCATCAGAGTCGTCGCCATCAAA

SEQ ID NO: 678

>AA455281

TTTTTGAGGAGTGGCATGGAGTCTTTAATTTGGAAGGCAAAAGGTTACATTTA
35 ATGAAAGGCAGAGGCTGGATTAATAAATGTTTGTAGAAAGTTGTTCTGACACAC
AGTGAACCTCTGGGCTTTTCTCCTGCATAAAAAGCAGAGCTAGCAGTAAGTGCAA
ATCTGAAGAAAATCCATGTGTCCAATAAGCTGCCATCTCCAGAACTCTTATCCAG
GAAATTCAAAGAGTGAACATTCTTTTAGTCTCCTACTCCTCAATTAAGTAAATGA
GAATGAGTCAGCCAACAAAGTTCATGACAACAAGGTGCAGGATGGTGCTGGCAA
40 AGAGAAAATCAGCAAAGGCTCGCTCTGGGGAGATGCCTTGGAATCCGCTTTGT
TCTGTGGGTTGATCTGTATTCTCAGGCAAACCGCTAGGATGAAACTCCCCACACA
AGAGATGAAGCCCGAGAGAAAAGAGTTGAAGGGGAAGGTCCC

SEQ ID NO: 679

45 >H94469

GCAAAACAACATTTATTCTTTTAAAAAATCTATATACATTGCCATACAAAGATAC
CACATTGAAGCAGTTCTCAGGAACCTTCCAGTGAGCCTTCTCTTATAATTGCCCG
AGCAAGATTTCTGTGCCAGAGAAAGTCTCAGCATTTCACCTTGGTGTNCTCTATG
TCATCATCCTGGAGCTGCTCGGTATCAGATTCTCCATGCACAGGTCTTCTTGACGT

CAAGTCCTCCAGACACCGCATCAACTCATAAGTCTGTTCTGCTGAGAAAATCACC
TGTTTCTGTTCCAAAAGGGGCAAGGCATCTGTCAGCAGAGTTCATCCCAGAAAGA
CCGAAGGGGCAATCCGAGACGTCATCAAG GACAGAAGGA

5 SEQ ID NO: 680

aa79c05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:827144 3' similar to
SW:RLX1_HUMAN P49406 PUTATIVE 60S RIBOSOMAL PROTEIN;; mRNA sequence
gi|2261786|gb|AA521243.1|AA521243[2261786]

TTTTTTTTTGGTGTACAAGTTTTATTTAGAAAAAAAGTATTAATAAAACAATGA
10 ATGCTTAGTTCACCTAATTACTATGTTCTTATAAATGAAATTAAATTGGTCTCAAA
ATATATCCTCTTAGAGCCAATGTATCTTCTGCAACTAACCAAATTCATTCTCAGA
ATCAAGACCTTTTCGACGCTTCAATTTCCCTTCCATATTGCAGCTTCAATTTTTGAA
GTATCATATTCCCTCATCATATCAAATTCAAGCCATGGACTGATTCCACTTCTGAG
CTTCTTTTCATTTGCTGTTCAAGTTAAACAAAGATCAAATCTGATTCTTTAATATTA
15 AAATTTGGACGTTCCAGCGTTTAGACCAGGGCTTAGGCTTCATTTTTACTTTTCAG
CTCATTAACAGGAACCTTTTTGGTTAGGCTCTTGTAAGTATAGCAAGCTATCATCCA
CAAAGTGCTATATTCAGGAAGGGCATCTCGTAAGTATAGCAAGCTATCATCCA
GCCGTTTCTCTAATTTGACCACCTGAATCTCCTGGACCCGAGGATTATAAAGTTC
AAAGCAAATCTCGACACCTTGTCTTCGATAACATTCTTAAGGAT GAAAGTAGC

20

SEQ ID NO: 681

Human Thy-1 glycoprotein gene, complete cds
gi|339682|gb|M11749:1|HUMTHY1A[339682]

GGATCCAGGACTGAGATCCAGAACCATGAACCTGGCCATCAGGATCGCTCTCCT
25 GCTAACAGGTACCCGGCATGGGGCAGGACTGGGGCTCCAGGCGCCCTGGCTTCC
TTCCCTCCAGAGAAGCAGCTTCTCCCTCACAGTCTCAGAAAAGCGCAGGTGACAA
AGAGAGGGGCTCTTTTTCATCCTGAAGTCAGCCGATCCACCGCGCTGATATTCTGA
CGGCCTGAGGTGGTTTTTGGAAACACAGTTTGCTGAGCCCTCCTTCACACTATTG
AACTAGAATCCCCAACTGAGAACCCAGGAACCAGCATCAACTCCCTAAGATCTC
30 CTGTCCTTGAAACACATTGATAGGATCCAAGGCTCAAGCAGAGTGGGGAGGGAG
GCTGGGGTCTGCAAAGGAGAAGTGGGATCCCTGGGGTG421GGGAAAGGCACTC
AGAGAGCAGACCCCGGTCCCCTCCCTAGCCAGGCCCATCTCTCCACTTCAGGTGG
GTGGGAGGCCCTGTGCCGCAGGCCCTCCAGTTTGAAGGAGGCACTGCTGGTG
CCAGTCTTGCAAGTCTCCCGAGGGCAGAAGGTGACCAGCCTAACGGCCTGCCTA
35 GTGGACCAGAGCCTTCGTCTGGAAGTCCCGCCATGAGAATACCAGCAGTTCACCCA
TCCAGTACGAGTTCAGCCTGACCCGTGAGACAAAGAAGCACGTGCTCTTTGGCAC
TGTGGGGGTGCCTGAGCACACATAACGCTCCCGAACCAACTTCACCAGCAAATA
CCACATGAAGGTCCTCTACTTATCCGCCTTCACTAGCAAGGACGAGGGCACCTAC
ACGTGTGCACTCCACCACTCTGGCCATTCCCCACCCATCTCCTCCAGAACGTCA
40 CAGTGCTCAGAGGTGAGACAAGCCCCTAACAAGGTCAAGTGAGCTGGGAGAGCC
AGGCTCGGGGACAGCAGGCAGTTCCCTTGGCTGGACTAGAGAGGAGAATAGCCC
CATAACGCTCTCACCTCTCCCAACTGCTGCCTGGTCAACTGGGGAACCATTTGCC
TTCGGTGTGAATGGGGTGAAGAGCTCAGGGCCAGACAGGCAGAGCAGTGTGGTT
CCACCAGAACTGTGGGCAAGGCCTTTGGCCCCCTAATCTTCCTTCTCCAGCGGGA
45 AACAGGGATGACACCACCTCCCTCAGCCAGTTTTCTTGTCATGATGTTTAGTAAG
GTTTTTCATAAGATGATATGTGTGCAAGAGATCAGTAATCTGCAAATGGGAAAGA
TGGCTGGTTCTGTGAGACCAGGCTGTTCTTGGTCCCAGCTAAGACATTGCAGTAC
CCACCTCCCAAAGGGAGTACACCCTTGCTTTGGGCCTGTGCCTGCCTGAGTCCTG
ATCCGTCTTCTTCTACCTGCCCCCGGCCCTTCTCTTTCTGCAGACAAACTG

GTCAAGTGTGAGGGCATCAGCCTGCTGGCTCAGAACACCTCGTGGCTGCTGCTGC
 TCCTGCTGTCCCTCTCCCTCCTCCAGGCCACGGATTTCATGTCCCTGTGACTGGTG
 GGGCCCATGGAGGAGACAGGAAGCCTCAAGTTCCAGTGCAGAGATCCTACTTCT
 CTGAGTCAGCTGACCCCCCTCCCCCAATCCCTCAAACCTTGAGGAGAAGTGGGGA
 5 CCCCACCCCTCATCAGGAGTTCCAGTGCTGCATGCGATTATCTACCCACGTCCAC
 GCGGCCACCTCACCTCTCCGCACACCTCTGGCTGTCTTTTGTACTTTTGTTC
 AGAGCTGCTTCTGTCTGGTTTATTTAGGTTTATCCTTCCTTTTCTTTGAGAGTTTCG
 TGAAGAGGGAAGCCAGGATTGGGGACCTGATGGAGAGTGAGAGCATGTGAGGG
 GTAGTGGGATGGTGGGGTACCAGCCACTGGAGGGGTCATCCTTGCCCATCGGGA
 10 CCAGAAACCTGGGAGAGACTTGATGAGGAGTGGTTGGGCTGTGCTGGGCCTAG
 CACGGACATGGTCTGTCTGACAGCACTCCTCGGCAGGCATGGCTGGTGCCTGAA
 GACCCAGATGTGAGGGCACCAACAAGATTTGTGGCCTACCTTGTGAGGGAGA
 GAACTGAGGATCTCCAGCATTCTCAGCCACAACCAAAAAAAAAATAAAAAGGGCA
 GCCCTCCTTACCACTGTGGAAGTCCCTCAGAGGCCTTGGGGCATGACCCAGTGAA
 15 GATGCAGGTTTGACCAGGAAAGCAGCGCTAGTGGAGGGTTGGAGAAGGAGGTA
 AAGGATGAGGGTTCATCATCCCTCCCTGCCTAAGGAAGCTAAAAGCATGGCCCT
 GCTGCCCTCCCTGCCTCCACCCACAGTGGAGAGGGCTACAAAGGAGGACAAGA
 CCCTCTCAGGCTGTCCAAGCTCCCAAGAGCTTCCAGAGCTCTGACCCACAGCCT
 CCAAGTCAGGTGGGGTGGAGTCCCAGAGCTGCACAGGGTTTGGCCCAAGTTTCT
 20 AAGGGAGGCACTTCCTCCCCTCGCCCATCAGTGCCAGCCCCCTGCTGGCTGGTGCC
 TGAGCCCCTCAGACAGCCCCCTGCCCGCAGGCCTGCCTTCTCAGGGACTTCTGC
 GGGGCCTGAGGCAAGCCATGGAGTGAGACCCAGGAGCCGGACACTTCTCAGGAA
 ATGGCTTTTCCCAACCCCCAGCCCCACCCGGTGGTTCTTCCTGTTCTGTGACTGT
 GTATAGTGCCACCACAGCTTATGGCATCTCATTGAGGACAAAGAAAAGTGCACA
 25 ATAAAACCAAGCCTCTGGAATCTGTCCTCGTGTCCACCTGGCCTTCGCTCCTCCA
 GCAGTGCCTGCCTGCCCCCGCTT

SEQ ID NO: 682

yw08h11.s1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:251685 3',
 mRNA sequence gi|1110224|gb|H96738.1|H96738[1110224]

30 TAAAAANAAATCTTTTTTTATTTCAAAGATTGCTTCTTATATTGAAGCTCATATTA
 AAGCAACAGTACAATGTTCAATAAATAAGTGTGATGCCGTAACATTTTCTTAC
 ATGTCAGAATACTGATATTTATATGTATACTAAAATAAGAACTTTAAAATTGTAC
 AAATAGATACATTAAAAATGACATAGAAATAGGGCGTCTCTCACTGAAACAAGA
 35 CAGTTATATCTGGCACGTATTAGTTTAAGATGAAAGTAGAAGCAAAAAGATTAC
 AAGAATCAGCAGTAACAAGATTGATGCTCAAGAGACATAATTGTACATTGTATT
 GTACATACATTGTATGGGTTTAAGCTGGCTGGAATATTATATATTTCCAAGTTTAA
 AAAATGGCNCTACCANATAGAGTGGTCCNGAGTTTAAGGCGAAATTACAGCTCA
 GAACTGTTGTCCCTTCNAATTTTGGTGG

40

SEQ ID NO: 683

Human integral membrane serine protease Seprase mRNA, complete cds
 gi|1924981|gb|U76833.1|HSU76833[1924981]

45 CCACGCTCTGAAGACAGAATTAGCTAACTTTCAAAAACATCTGGAAAAATGAAG
 ACTTGGGTAAAAATCGTATTTGGAGTTGCCACCTCTGCTGTGCTTGCCTTATTGGT
 GATGTGCATTGTCTTACGCCCTTCAAGAGTTCATAACTCTGAAGAAAATACAATG
 AGAGCACTCACACTGAAGGATATTTTAAATGGAACATTTTCTTATAAAACATTTT
 TTCCAAACTGGATTTCAAGACAAGAATATCTTCATCAATCTGCAGATAACAATAT
 AGTACTTTATAATATTGAAACAGGGCAATCATATACCATTTTGAGTAATAGAACC

ATGAAAAGTGTGAATGCTTCAAATTACGGCTTATCACCTGATCGGCAATTTGTAT
ATCTAGAAAGTGATTATTCAAAGCTTTGGAGATACTCTTACACAGCAACATATTA
CATCTATGACCTTAGCAATGGAGAATTTGTAAGAGGAAATGAGCTTCCTCGTCCA
ATTCAGTATTTATGCTGGTCGCCTGTTGGGAGTAAATTAGCATATGTCTATCAAA
5 ACAATATCTATTTGAAACAAAGACCAGGAGATCCACCTTTTCAAATAACATTTAA
TGGAAGAGAAAATAAAATATTTAATGGAATCCCAGACTGGGTTTATGAAGAGGA
AATGCTTGCTACAAAATATGCTCTCTGGTGGTCTCCTAATGGAAAATTTTTGGCA
TATGCGGAATTTAATGATACGGATATACCAGTTATTGCCTATTCTATTATGGCG
ATGAACAATATCCTAGAACAATAAATATTCCATACCCAAAGGCTGGAGCTAAGA
10 ATCCCGTTGTTTCGGATATTTATTATCGATACCACTTACCCTGCGTATGTAGGTCCC
CAGGAAGTGCCCTGTTCCAGCAATGATAGCCTCAAGTGATTATTATTTAGTTGGC
TCACGTGGGTTACTGATGAACGAGTATGTTTGCAGTGGCTAAAAAGAGTCCAGA
ATGTTTCGGTCCTGTCTATATGTGACTTCAGGGAAGACTGGCAGACATGGGATTG
TCCAAAGACCCAGGAGCATATAGAAGAAAGCAGAACTGGATGGGCTGGTGGATT
15 CTTTGTTC AACACCAGTTTTCAGCTATGATGCCATTTTCGTA CTACAAAATATTTA
GTGACAAGGATGGCTACAAACATATTCATCTATATCAAAGACACTGTGGAAAATG
CTATTCAAATTACAAGTGGCAAGTGGGAGGCCATAAATATATTCAGAGTAACAC
AGGATTCACTGTTTTATTCTAGCAATGAATTTGAAGAATACCCTGGAAGAAGAAA
CATCTACAGAATTAGCATTGGAAGCTATCCTCCAAGCAAGAAGTGTGTTACTTGC
20 CATCTAAGGAAAGAAAGGTGCCAATATTACACAGCAAGTTTCAGCGACTACGCC
AAGTACTATGCACTTGTCTGCTACGGCCCAGGCATCCCCATTTCCACCCTTCATG
ATGGACGCACTGATCAAGAAATTA AAAATCCTGGAAGAAAACAAGGAATTGGAAA
ATGCTTTGAAAAATATCCAGCTGCCTAAAGAGGAAATTAAGAACTTGAAGTAG
ATGAAATTACTTTATGGTACAAGATGATTCTTCTCTCTCAATTTGACAGATCAAA
25 GAAGTATCCCTTGCTAATTCAAGTGTATGGTGGTCCCTGCAGTCAGAGTGTAAAG
TCTGTATTTGCTGTTAATTGGATATCTTATCTTGCAAGTAAGGAAGGGATGGTCA
TTGCCTTGGTGGATGGTCGAGGAACAGCTTTCCAAGGTGACAACTCCTCTATGC
AGTGTATCGAAAGCTGGGTGTTTATGAAGTTGAAGACCAGATTACAGCTGTCAG
AAAATTCATAGAAATGGGTTTCATTGATGAAAAAAGAATAGCCATATGGGGCTG
30 GTCCTATGGAGGATACGTTTCATCACTGGCCCTTGCACTCTGGAACCTGGTCTTTTCA
AATGTGGTATAGCAGTGGCTCCAGTCTCCAGCTGGGAATATTACGCGTCTGTCTA
CACAGAGAGATTCATGGGTCTCCCAACAAAGGATGATAATCTTGAGCACTATAA
GAATTCAACTGTGATGGCAAGAGCAGAATATTTAGAAATGTAGACTATCTTCTC
ATCCACGGAACAGCAGATGATAATGTGCACTTTCAGAACTCAGCACAGATTGCT
35 AAAGCTCTGGTTAATGCACAAGTGGATTTCAGGCAATGTGGTACTCTGACCAGA
ACCACGGCTTATCCGGCCTGTCCACGAACCACTTATACACCCACATGACCCACTT
CCTAAAGCAGTGTCTTCTTTGTCAGACTAAAAACGATGCAGATGCAAGCCTGTA
TCAGAATCTGA

40 SEQ ID NO: 684

zw83d07.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:782797 3', mRNA
sequence gi|2161864|gb|AA448194.1|AA448194[2161864]

TTTTTTTTTAAAAAAAATTAATATTTTTTATTATATACTTTTAAACATATAGAAGA
TAGAAAAAACAGTACAATGAACAGCCATGTCCACCAGTTAGATTCTGTAACAT
45 TTTGCCACATACGCCTCACATACATTTTGTTAAACCATTTGAAACATTTTAAGACA
CTCTAACACTTCATTCTAAATGCTTAAGTATGCAAATTAAGACAGTCTTTTATAA
ACTACAACACCCTTCTCACAGCTCATAAAATTACCAATAATTATCCAATATCATT
CAAAATCTAATCCACATTCAAATTTTCTCAACTGCCTCACCACCGTGCTGGCCTCC

CACCCCCACCTCAGTCTTTTACAGATGGTTTTTCAAAATAGAGTCCAGTAAAATA
TTTCACATTGCATTTGGTTATTACATAACTTT TAATCAAGAAGAGTTAC

SEQ ID NO: 685

5 Human gene for preproenkephalin gi|31150|emb|V00509.1|HSENK1[31150]
CCGACCCCTCCCGCGAAGGCGTCGGCGCGGGGCTGGCGTAGGGCCTGCGTCAGC
TGCAGCCCGCCGGCGATTGGGGCGCGCGCGCCTCCTTCGGTTTGGGGCTAATTAT
AAAGTGGCTCCAGCAGCCGTTAAGCCCCGGGACGGCGAGGCAGGCGCTCAGAGC
CCCGCAGCCTGGCCCGTGACCCCGCAGAGACGCTGAGGACCGCGACGGTGAGGC
10 CCTACGTCCGCCAGCACACCCGGGCCGCTTCTCCCCGACGCCCGCCCTCCTCAC
ACTTGCCTTCTTCTTCTTCCCTCTAGAGTCGTGTCTGAACCCGGCTTTTCCAATTGG
CCTGCTCCATCCGAACAGCGTCAACGTGAGTGAATTTGCCCAGAGCTTGTCTTTG
CTGAGCGGGTTTGGGGACGTCTGCCCGCCCTCTTTCCCTTCACATTTCAATTGCATG
GGTTCCTCCCAACAGCGTTCCTTGGTTCTTCTTTGTGACCCAGTCAATGTCCTGCCT
15 CCCCCGGCTCCCGCTCTCTCGCCCTGGTCTGCGGCGTTCTCTCCGGAATCTTGCC
CTGGGCCGCGGACGCCCAGGAAAAGAGCCGGGTGCCCCAGGCAGCCTCGCGTTG
GGGGCGACCGCGCCATCCCGGGAACCGCGAGGCGATCTGAGTCGCTCCACGTC
TACCTAAAAGCTGTGCGGCCGGGAGGGCGGGGCCCCAGAAAGGAGCATTCTGCG
GGCTTTTGCTCGACGATCCCCTGCTGAGGCTGTCGCGGCGAGGGTCTGCCGAGG
20 GACCCCGTTCTGCGCCAGGCAGGCTCGAAGCACGCGTCCCTCTCTCCTCGCAGT
CCATGGCGCGGTTCTTGACACTTTGCACTTGGCTGCTGTTGCTCGGCCCGGGCT
TCCCTGGCGACCGTGCGGGCCGAATGCAGCCAGGATTGCGCGACGTGCAGCTACCG
TCTAGTGCGCCCGGCCGACATCAACTTCTGGTGAGTGTGCGCGCGGGCGAGTGT
TGGCGACCTTGTGAGACAGAGTTTCGG

SEQ ID NO: 686

yi26gl2.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:140422 3', mRNA
sequence gi|838397|gb|R65759.1|R65759[838397]

30 AAAATTTTTNTACCGTATTTATTGGTTCAAAAAGTCTAGTATTTATAGTTTCAGGCA
GATTTCAACCAAAGAGTCACCAAATTAATAACAGGGTAGCTTGTGAGGCATA
GACACAGCCCATGTGTTTTCTCTACATTGTATATTCATTTCTCTTTGGCGATTTG
ACATTATAGCCATTCTCTGGAAGTCCTAAAGCAAAGTCTAGTATTTTATGTGCCATA
TTAAGTTAAATTTCTTATGTGAGGATACCACTAATACTGGGTTTTGATTTAGGG
CCATCCTTCTTGCCGGGGGGTATGGACAATGGGGGGCTTGTTTCTATGGATTAAG
35 GNCCCTACCCCTGGGGCCAGGTGNTATGGGGGNATTGTTAAAACCATGGCCATT
ATTATGGTGGGGGGCCAACCCCCACCCNTGGAAG GGA

SEQ ID NO: 687

>R91550

40 GGAGGATGTGGGCCACGCAGGGCTGGCGGTGGCGCTGGCTCTGAGCGTGCTGCC
GGGCACCGGGCGCTGCGGCCGGGCGACTGCGAAGTTTGTATTTCTTATCTGGGAA
GATTTTACCAGGACCTCAAAGACAGAGATGTCACATTCTCACCAGCCACTATTGA
AAACGAACTTATAAAGTTCTGCCGGGAAGCAAGAGGCAAAGAGAATCGGTTGTG
CTACTATATCGGGGCCACAGATGATGCAGCCACCAAAATCATCAATGAGGTATC
45 AAAGCCTCTGGCCCCACCACATCCCTGTGGGAGAAGATCTGTGAGAAGCTTAAG
GAAGAAGGACAGCCAGATATGTGAGCTTAAGTAT GGACAAGCAGATCC

SEQ ID NO: 688

>M94054

GGGCGTGATTTGAGCCCCGTTTTTATTTTCTGTGAGCCACGTCCTCCTCGAGGGG
GTCAATCTGGCCAAAAGGAGTGATGCGCTTCGCCTGGACCGTGCTCCTGCTCGGG
CCTTTGCAGCTCTGCGCGCTAGTGCAGTGCGCCCTCCCGCCGCCGGCCAACAGC
AGCCCCCGCGCGAGCCGCCGGCGGCTCCGGGGCGCCTGGCGCCAGCAGATCCAAT
5 GGGAGAACAAACGGGCAGGTGTTTCACTTGTGAGCCTGGGCTCACAGTACCAGC
CTCAGCGCCGCCGGGACCCGGGCGCCGCGTCCCTGGTGCAGCCAACGCCTCCG
CCCAGCAGCCCCGCACTCCGATCCTGCTGATCCGCGACAACCGCACCGCCGCGGC
GCGAACGCGGACGGCCGGCTCATCTGGAGTCACCGCTGGCCGCCCCAGGCCCAC
CGCCCGTCACTGGTTCCAAGCTGGCTACTCGACATCTAGAGCCCGCGAACGTGGC
10 GCCTCGCGCGCGGAGAACCAGACAGCGCCGGGAGAAGTTCCTGCGCTCAGTAAC
CTGCGGCCGCCAGCCGCGTGGACGGCATGGTGGGCGACGACCCTTACAACCCC
TACAAGTACTCTGACGACAACCCTTATTACAATACTACGATACTTATGAAAGGC
CCAGACCTGGGGGACAGGTACCGGCCCGGATACGGCACTGGCTACTTCCAGTACG
GTCTCCCAGACCTGGTGGCCGACCCCTACTACATCCAGGCGTCCACGTACGTGCA
15 GAAGATGTCCATGTACAACCTGAGATGCGCGGCGGAGGAAAACCTGTCTGGCCAG
TACAGCATAACAGGGCAGATGTCAGAGATTATGATCACAGGGTGTCTGCTCAGATTT
CCCCAAAGAGTGAAAAACCAAGGGACATCAGATTTCTTACCCAGCCGACCAAGA
TATTCCTGGGAATGGCACAGTTGTCATCAACATTACCACAGTATGGATGAGTTTA
GCCACTATGACCTGCTTGATGCCAACACCCAGAGGAGAGTGGCTGAAGGCCACA
20 AAGCAAGTTTCTGTCTTGAAGACACATCCTGTGACTATGGCTACCACAGGCGATT
TGCATGTACTGCACACACAGGGATTGAGTCCTGGCTGTTATGATACCTATGGT
TGCAGACATAGACTGCCAGTGGATTGATATTACAGATGTAAAACCTGGAAACTAT
ATCCTAAAGGTCAGTGTAACCCAGCTAGCTGGTTCCTGAATCTGACTATAGCA
ACAATGTTGTGCGCTGTGACATTCGCTACACAGGACATCATGCGTATGCCTCAGG
25 CTGCACAATTTACCGTATTAGAAGGCCAAAGCAAAACTCCCAATGGATAAATCA
GTGCCTGGTGTCTGAAGTGGGAAAAAATAGACTAACTTCAGTAGGATTTATGTA
TTTTGAAAAAGAGAACAGAAAAACAACAAAAGAATTTTTGTTTGGACTGTTTTCAA
TAACAAAGCACATAACTGGATTTTGAACGCTTAAGTCAATCATTACTTGGAATTT
TNTAATGTTTATTATTTACATCAACTTTGTGAATTAACACAGTGTTCATTCTGT
30 AATTCATATTTGACTCTTT

SEQ ID NO: 689

Human mRNA for beta-actin gi|28251|emb|X00351.1|HSAC07[28251]

TTGCCGATCCGCCGCCCGTCCACACCCGCCGCGCAGCTCACCATGGATGATGATAT
35 CGCCGCGCTCGTCGTCGACAACGGCTCCGGCATGTGCAAGGCCGGCTTCGCGGG
CGACGATGCCCCCGGGCCGTCTTCCCCTCCATCGTGGGGCGCCCCAGGCACCAG
GGCGTGATGGTGGGCATGGGTCAGAAGGATTCCCTATGTGGGCGACGAGGCCAG
AGCAAGAGAGGCATCCTCACCTGAAGTACCCCATCGAGCACGGCATCGTCACC
AACTGGGACGACATGGAGAAAATCTGGCACCACACCTTCTACAATGAGCTGCGT
40 GTGGCTCCCGAGGAGCACCCCGTGCTGCTGACCGAGGCCCCCTGAACCCCAAG
GCCAACCGCGAGAAGATGACCCAGATCATGTTTGAGACCTTCAACACCCCAAG
ATGTACGTTGCTATCCAGGCTGTGCTATCCCTGTACGCCTCTGGCCGTACCACTG
GCATCGTGATGGACTCCGGTGACGGGGTCACCCACACTGTGCCCATCTACGAGG
GGTATGCCCTCCCCCATGCCATCCTGCGTCTGGACCTGGCTGGCCGGGACCTGAC
45 TGACTACCTCATGAAGATCCTCACCGAGCGCGGCTACAGCTTCACCACCACGGCC
GAGCGGGAAATCGTGCGTGACATTAAGGAGAAGCTGTGCTACGTCGCCCTGGAC
TTCGAGCAAGAGATGGCCACGGCTGCTTCCAGCTCCTCCCTGGAGAAGAGCTAC
GAGCTGCCTGACGGCCAGGTCATCACCATTGGCAATGAGCGGTTCCGCTGCCCTG
AGGCACTCTTCCAGCCTTCCTTCCCTGGGCATGGAGTCCTGTGGCATCCACGAAAC

TACCTTCAACTCCATCATGAAGTGTGACGTGGACATCCGCAAAGACCTGTACGCC
AACACAGTGCTGTCTGGCGGCACCACCATGTACCCTGGCATTGCCGACAGGATGC
AGAAGGAGATCACTGCCCTGGCACCCAGCACAAATGAAGATCAAGATCATTGCTC
CTCCTGAGCGCAAGTACTCCGTGTGGATCGGCGGCTCCATCCTGGCCTCGCTGTC
5 CACCTTCCAGCAGATGTGGATCAGCAAGCAGGAGTATGACGAGTCCGGCCCCCTC
CATCGTCCACCGCAAATGCTTCTAGGCGGACTATGACTTAGTTGCGTTACACCCT
TTCTTGACAAAACCTAACTTGCGCAGAAAACAAGATGAGATTGGCATGGCTTTAT
TTGTTTTTTTTGTTTTGTTTTGGTTTTTTTTTTTTTTTTTTGGCTTGACTCAGGATTTAA
AACTGGAACGGTGAAGGTGACAGCAGTCGGTTGGAGCGAGCATCCCCCAAAGT
10 TCACAATGTGGCCGAGGACTTTGATTGCACATTGTTGTTTTTTTAATAGTCATTCC
AAATATGAGATGCATTGTTACAGGAAGTCCCTTGCCATCCTAAAAGCCACCCAC
TTCTCTCTAAGGAGAATGGCCAGTCCTCTCCAAGTCCACACAGGGGAGGTGAT
AGCATTGCTTTCGTGTAAATTATGTAATGCAAAATTTTTTTAATCTTCGCCTTAAT
ACTTTTTTATTTTGTTTTATTTTGAATGATGAGCCTTCGTGCCCCCCTTCCCCCTT
15 TTTGTCCCCCAACTTGAGATGTATGAAGGCTTTTGGTCTCCCTGGGAGTGGGTGG
AGGCAGCCAGGGCTTACCTGTACACTGACTTGAGACCAGTTGAATAAAAGTGCA
CACCTTA

SEQ ID NO: 690

20 >AA435938

TTTCATGCTCATTGCTGTTTATTGAAACAAAAGAATCAGAAGAAGATCAGAATGA
AGACAATAATAAAAAGCAGAAGCAGAAGTACAAGAAGAATAAAGAAAGAAAGG
GAAAGAATTGTAGGAAGGAAAAACTTGTAGAAGTAGAGGGTGGAGAGTGCGA
GAGGTGGAGTATGATGGGCAGTCCGATCTTTCCATCTGGGCTTTCAGACAATGG
25 GATATGTCATGGAAGGCTTCTTTAAACACCAGAAGAAATTCAGGATAAAGCTCA
AAAAGAGCAGGCAATCGATAGGGGTTGAAAATCCACTCAGTAGGCCACGGAAG
GACTTCAAGAAGGTTGATCGTTCTGTCTGCTGGATGTTGTAGGTGTCCTACGTGAA
GGCAATCGACATCTGGATGGCTGTGTGTCTGCTCTTTGTGTT
CGCTGCCTTGCTGGAG

30

SEQ ID NO: 691

>AA443497

TCCAAGGTCATGGCAAAACATCTGAAGTTCATCGCCAGGACTGTGATGGTACAG
GAAGGGAACGTGGAAAGCGCATACAGGACCCTAAACAGAATCCTCACTATGGAT
35 GGGCTCATTGAGGACATTAAGCATCGGCGGTATTATGAGAAGCCATGCCGCCGC
GACAGAGGGAAAGCTATGAAAGGTGCCGGCGGATCTACAACATGGAAATGGCTC
GCAAGATCAACTTCTTGATGCGAAAGAATCGGGCAGATCCGTGGCAGGGCTGCT
GAGGCCTGTGGGTGGGACACCAGTGCGAAACCCTCATCCAGTTTTCTCTCCATCT
CTTTTCTTTGTACAATCCCATTTCTATTACCATTCTCTGCAATAAACTCAAATCA
40 CATGTCTGC

SEQ ID NO: 692

zfl7e01.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:377208 3',
mRNA sequence gi|1547536|gb|AA055198.1|AA055198[1547536]

45 CACCTTAAAACTAGGTTTCTATTTCTGGTTAGATTCTAGAGCAGTGGAACCTCAG
GAGTGATACTATAACCCTACCCAGTCCCACCACAGCCTGCCTCCTTCTCCACAG
AGATAACATTGTACAAAACCTGTATTTACAAGAAAACCAATTAATAAGGGT
GTGTGCAAAAGTAGACAGGAGAGTCAAGACATATCAATGCAGGGATGGCTTTGG
GGAATGGGGGACTCAAGGTTCTACACTGGAACCTGGGG

SEQ ID NO: 693

zt87h10.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:729379 3', mRNA sequence

5 gi|2140847|gb|AA435933.1|AA435933[2140847]
 TTTTGGTTCAAACAATGGAACATTTTATTATATCATATTACAAAGAGTCAGTGAT
 GGGCC
 ATTCCAGGATTGGTTAATTCAGTAGTTCACCAAAGTCATCAAGGATCCGTCTTTC
 CATCTCCCTTCTCTGCCACCCTCAAGGTTTAAGACGGCTGTTGCAGTTCAGACAT
 10 TATATCAAGATGCAGTATTCACAGAAAGAGGACTGTTCAATTTCTTTACCAGAAGA
 TTCTCCCATATATCATGTGTCTACATCTAAACCAATCACTACTAAGGGGAAATTG
 ACCTACAACATTTGGATTAGACTAATCAAATTTACCTTCTGAGTTAGGCATAGAG
 TCAACTTCTATGAGCACATGGCTGAGCCAAGGATAAGCATTCTGCCAGCAAGAG
 AGGACATAATATGGGTGTGGGATTGGAGATGGGAGAG

SEQ ID NO: 694

yo27c07.s1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:179148 3', mRNA sequence gi|989944|gb|H50103.1|H50103[989944]

20 AAATTTATCAATGACAAACAGACATAAACTCAAAGTTTGGCTCTTCTGAGGGGC
 AGGAGAAAACTGGTGATGTTCTTTTATACAGATGAAACATGGGTNCAGAAATT
 ACACGNCACTTCTAAAGCAACCAGAAGAGGGACACGAAAGCAAACCTGTACATT
 CACTAGGANTTTGCAGTCATTTTCAAGATTTCCACTAGGTAAGAAAATACANTTTTG
 CGTTAGTTTTNCCGTGCTCGGGTGTATGAAAAAANCCCGACCATGCAG
 CAACGTCTCCAGCGCTTAGGNCCGTAAANNTGTTCTAAGCACAGAAGTACATGT
 25 GGGAAGATTTCTCTCATCATTTTTTNGTAAANCAAAGCGTTCTAATATTTTACAGA
 CCAAGTTAGGGCCAGTTTTTNTTTTCCCT

SEQ ID NO: 695

za29f01.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:293977 5', mRNA sequence gi|1267964|gb|N95657.1|N95657[1267964]

30 GCAGAAGCGAACAACCTGAGCTTTCCCTTGGAGCCCCTGAGCAGGGAGAGGGCT
 CACAAGCTTGAGGCCATCTCTCGCCTCTGCGAGNACNAAGTACAAGGACCTAAG
 AAGATCCGCGAGAAGCGCTCAGCCAGTGCAGACAACCTGACTCTGCCCCGGTGG
 TCCCCAGCCATCATCTCTTAACCTACGGAGGCCCGCCGACCACACCATCCCTTAG
 35 TTTCTCCTTTAGTTTGAGAAAAGACAGACTTGGGGTNGGTTTGTTTTGTTTTTC
 TTTCTTTTCTTTTTTTTACGCATAGCTCCCGTCAAAGCTGCCT

SEQ ID NO: 696

Human lysophosphatidic acid receptor homolog mRNA, complete cds

40 gi|1857424|gb|U80811.1|HSU80811[1857424]
 TCACCACCTACAACCACAGAGCTGTCATGGCTGCCATCTCTACTTCCATCCCTGT
 AATTTACAGCCCCAGTTCACAGCCATGAATGAACCACAGTGCTTCTACAACGAG
 TCCATTGCCTTCTTTTATAACCGAAGTGGAAGCATCTTGCCACAGAATGGAACA
 CAGTCAGCAAGCTGGTGATGGGACTTGGAATCACTGTTTGTATCTTCATCATGTT
 45 GGCCAACCTATTGGTCATGGTGGCAATCTATGTCAACCGCCGCTTCCATTTTCCTA
 TTTATTACCTAATGGCTAATCTGGCTGCTGCAGACTTCTTTGCTGGGTGGCCTAC
 TTCTATCTCATGTTCAACACAGGACCCAATACTCGGAGACTGACTGTTAGCACAT
 GGCTCCTGCGTCAGGGCCTCATTGACACCAGCCTGACGGCATCTGTGGCCAACCT
 ACTGGCTATTGCAATCGAGAGGCACATTACGGTTTTCCGCATGCAGCTCCACACA

CGGATGAGCAACCGGCGGGTAGTGGTGGTCATTGTGGTCATCTGGACTATGGCC
 ATCGTTATGGGTGCTATACCCAGTGTGGGCTGGAAGTGTATCTGTGATATTGAAA
 ATTGTTCCAACATGGCACCCCTCTACAGTGACTCTTACTTAGTCTTCTGGGCCATT
 TTCAACTTGGTGACCTTTGTGGTAATGGTGGTTCTCTATGCTCACATCTTTGGCTA
 5 TGTTCCGCCAGAGGACTATGAGAATGTCTCGGCATAGTTCTGGACCCCGGCGGAAT
 CGGGATAACCATGATGAGTCTTCTGAAGACTGTGGTTCATTGTGCTTGGGGCCTTTA
 TCATCTGCTGGACTCCTGGATTGGTTTTGTTACTTCTAGACGTGTGCTGTCCACAG
 TGCAGCGTGTGGCCTATGAGAAATTCTTCCTTCTCCTTGCTGAATTCAACTCTGC
 CATGAACCCCATCATTTACTCCTACCGCGACAAAGAAATGAGCGCCACCTTTAGG
 10 CAGATCCTCTGCTGCCAGCGCAGTGAGAACCCACCGGCCCCACAGAAAGCTCA
 GACCGCTCGGCTTCCTCCCTCAACCACACCATCTTGGCTGGAGTTCACAGCAATG
 ACCACTCTGTGGTTTAGAACGGAAACTGAGATGAGGAACCAGCCGTCCTCTCTTG
 GAGGATAAACAGCCTCCCCCTACCCAATTGCCAGGGCAAGGTGGGGTGTGAGAG
 AGGAGAAAAGTCAACTCATGTACTTAAACACTAACCAATGACAGTATTTGTTCTT
 15 GGACCCCAACAAGACTTGATATATATTGAAAATTAGCTTATGTGACAACCCTCATC
 TTGATCCCCATCCCTTCTGAAAGTAGGAAGTTGGAGCTCTTGCAATGGAATTCAA
 GAACAGACTCTGGAGTGTCCATTTAGACTACACTAAGTACTTTTAAAAGATTT
 TGTGTGGTTTGGTGCAAGTCAGAATAAATTCTGGCTAGTTGAATCCACAACCTCA
 TTTATATACAGGCTTCCCTTTTTTATTTTAAAGGATACGTTTCACTTAATAAACA
 20 CGTTTATGCCTATCAGCAAAAAAAAAAAAAAAAAA

SEQ ID NO: 697
 zfl6g09.r1 Soares fetal heart NBHH19W Homo sapiens cDNA clone IMAGE:377152:5
 similar to SW:NUYM_BOVIN_Q02375 NADH-UBIQUINONE OXIDOREDUCTASE 18

25 KD SUBUNIT PRECURSOR ;, mRNA sequence
 gi|1547458|gb|AA055101.1|AA055101[1547458]
 GCAGCAAGATGGCGGCGGTCTCAATGTCAAGTGGTACTGAGGCAGACGTTGTGGC
 GGAGAAGGGCAGTGGCTGTAGCTGCCCTTCCGTTTCCAGGGTTCGACCCAGGTC
 GTTGAGGACTTCCACATGGAGATTGGCACAGGACCAGACTCAAGACACACAAC
 30 CATAACAGTTGATGAAAAATTGGATATCACTACTTTAACTGGCGTTCCAGAAGAG
 CATATAAAAACTAGAAAAGTCAGGATCTTTGTTCTGCTCGCAATAACATGCAGT
 CTGGAGTAAACAACACAAAGAAATGGAAGATGGAGTTTGANTACCAGGGAGCG
 ATGGGAAAATCCTTTGATGGGTTNGGCATCAACCGGCTTGATCCCCTTTTCCNA
 CATGGGTTCTAAAC

35
 SEQ ID NO: 698
 Human interleukin 11 mRNA, complete cds gi|186272|gb|M57765.1|HUMIL11[186272]
 GCTCAGGGCACATGCCTCCCCCTCCCCAGGCGCGGCCAGCTGACCCTCGGGGCT
 CCCCCGGCAGCGGACAGGGAAGGGTTAAAGGCCCGGCTCCCTGCCCCCTGCC
 40 CTGGGGAACCCCTGGCCCTGTGGGGACATGAACTGTGTTTGCCGCCTGGTCCTGG
 TCGTGCTGAGCCTGTGGCCAGATACAGCTGTGCCCCCTGGGCCACCACTGGCCC
 CCCTCGAGTTTCCCCAGACCCTCGGGCCGAGCTGGACAGCACCGTGCTCCTGACC
 CGCTCTCTCCTGGCGGACACGCGGACAGCTGGCTGCACAGCTGAGGGACAAATTC
 CCAGCTGACGGGGACCACAACCTGGATTCCCTGCCACCCCTGGCCATGAGTGCG
 45 GGGGCACTGGGAGCTCTACAGCTCCCAGGTGTGCTGACAAGGCTGCGAGCGGAC
 CTACTGTCCTACCTGCGGCACGTGCAGTGGCTGCGCCGGGCAGGTGGCTCTTCCC
 TGAAGACCCTGGAGCCCGAGCTGGGCACCCTGCAGGCCCGACTGGACCGGCTGC
 TGCGCCGGCTGCAGCTCCTGATGTCCCGCCTGGCCCTGCCCCAGCCACCCCGGA
 CCCGCCGGCGCCCCCGCTGGCGCCCCCTCCTCAGCCTGGGGGGGCATCAGGGCC

GCCCACGCCATCCTGGGGGGGCTGCACCTGACACTTGA CTGGGCCGTGAGGGGA
 CTGCTGCTGCTGAAGACTCGGCTGTGACCCGGGGCCCAAAGCCACCACCGTCCTT
 CCAAAGCCAGATCTTATTTATTTATTTATTTTCAGTACTGGGGGCGAAACAGCCAG
 GTGATCCCCCGCCATTATCTCCCCCTAGTTAGAGACAGTCCTTCCGTGAGGCCT
 5 GGGGGACATCTGTGCCTTATTTATACTTATTTATTTTCAGGAGCAGGGGTGGGAGG
 CAGGTGGACTCCTGGGTCCCCGAGGAGGAGGGGACTGGGGTCCCGGATTCTTGG
 GTCTCCAAGAAGTCTGTCCACAGACTTCTGCCCTGGCTCTTCCCCATCTAGGCCTG
 GGCAGGAACATATATTATTTATTTAAGCAATTACTTTTCATGTTGGGGTGGGGAC
 GGAGGGGAAAGGGAAGCCTGGGTTTTTGTACAAAAATGTGAGAAACCTTTGTGA
 10 GACAGAGAACAGGGAATTAAATGTGTCATACATATCC

SEQ ID NO: 699

Homo sapiens mRNA for GABA-BR1a (hGB1a) receptor

gi|2826760|emb|Y11044.1|HSGTHLA1[2826760]

15 ATGCTGCTGCTGCTGCTGGCGCCACTCTTCCTCCGCCCCCGGGCGCGGGGCGGGG
 CGCAGACCCCCAACGCCACCTCAGAAGGTTGCCAGATCATAACCCGCCCTGGG
 AAGGGGGCATCAGGTACCGGGGCTGACTCGGGACCAGGTGAAGGCTATCAACT
 TCCTGCCAGTGGACTATGAGATTGAGTATGTGTGCCGGGGGGAGCGCGAGGTGG
 TGGGGCCCAAGGTCCGCAAGTGCCTGGCCAACGGCTCCTGGACAGATATGGACA
 20 CACCCAGCCGCTGTGTCCGAATCTGCTCCAAGTCTTATTTGACCCTGGAAAATGG
 GAAGGTTTTCTTGACGGGTGGGGACCTCCCAGCTCTGGACGGAGCCCGGGTGA
 TTTCCGGTGTGACCCCGACTTCCATCTGGTGGGCAGCTCCCGGAGCATCTGTAGT
 CAGGGGCCAGTGGAGCACCCCGAAGCCCACTGGCAGGTGAATCGAACGCCACAC
 TCAGAACGGCGCGCAGTGTACATCGGGGCACTGTTTTCCCATGAGCGGGGGCTGG
 25 CCAGGGGGCCAGGCCTGCCAGCCCGCGGTGGAGATGGCGCTGGAGGACGTGAAT
 AGCCGCAGGGACATCCTGCCGGACTATGAGCTCAAGCTCATCCACCACGACAGC
 AAGTGTGATCCAGGCCAAGCCACCAAGTACCTATATGAGCTGCTCTACAACGAC
 CCTATCAAGATCATCCTTATGCCTGGCTGCAGCTCTGTCTCCACGCTGGTGGCTG
 AGGCTGCTAGGATGTGGAACCTCATTGTGCTTTCCCTATGGCTCCAGCTCACCAGC
 30 CCTGTCAAACCGGCAGCGTTTTCCCACTTTCTTCCGAACGCACCCATCAGCCACA
 CTCCACAACCCTACCCGCGTGAAACTCTTTGAAAAGTGGGGCTGGAAGAAGATT
 GCTACCATCCAGCAGACCACTGAGGTCTTCACTTCGACTCTGGACGACCTGGAGG
 AACGAGTGAAGGAGGCTGGAATTGAGATTACTTTCCGCCAGAGTTTCTTCTCAGA
 TCCAGCTGTGCCCGTCAAAAACCTGAAGCGCCAGGATGCCGAATCATCGTGGG
 35 ACTTTTCTATGAGACTGAAGCCCGGAAAGTTTTTTGTGAGGTGTACAAGGAGCGT
 CTCTTTGGGAAGAAGTACGTCTGGTTCCTCATTGGGTGGTATGCTGACAATTGGT
 TCAAGATCTACGACCCTTCTATCAACTGCACAGTGGATGAGATGACTGAGGCGGT
 GGAGGGCCACATCACAACCTGAGATTGTCATGCTGAATCCTGCCAATACCCGCAG
 CATTTCCAACATGACATCCCAGGAATTTGTGGAGAACTAACCAAGCGACTGAA
 40 AAGACACCCTGAGGAGACAGGAGGCTTCCAGGAGGCACCGCTGGCCTATGATGC
 CATCTGGGCCTTGGCACTGGCCCTGAACAAGACATCTGGAGGAGGCGGCCGTTCT
 GGTGTGCGCCTGGAGGACTTCAACTACAACAACCAGACCATTACCGACCAAATC
 TACCGGGCAATGAACTCTTCGTCCTTTGAGGGTGTCTCTGGCCATGTGGTGTGTTG
 ATGCCAGCGGCTCTCGGATGGCATGGACGCTTATCGAGCAGCCTCAGGGTGGCA
 45 GCTACAAGAAGATTGGCTACTATGACAGCACCAAGGATGATCTTTCCTGGTCCAA
 AACAGATAAATGGATTGGAGGGTCCCCCCCAGCTGACCAGACCCTGGTCATCAA
 GACATTCCGCTTCCTGTCACAGAACTCTTTATCTCCGTCTCAGTTCTCTCCAGCC
 TGGGCATTGTCTTAGCTGTTGTCTGTCTGTCTTTAACATCTACAACCTACATGTC
 CGTTATATCCAGAACTCACAGCCCAACCTGAACAACCTGACTGCTGTGGGCTGCT

CACTGGCTTTAGCTGCTGTCTTCCCCCTGGGGCTCGATGGTTACCACATTGGGAG
 GAACCAGTTTCCTTTCGTCTGCCAGGCNCGCCTCTGGCTCCTGGGCCTGGGCTTTA
 GTCTGGGCTACGGTTCCATGTTACCAAGATTTGGTGGGTCCACACGGGCTTCAC
 AAAGAAGGAAGAAAAGAAGGAGTGGAGGAAGACTCTGGAACCCTGGAAGCTGT
 5 ATGCCACAGTGGGCCTGCTGGTGGGCATGGATGTCCTCACTCTCGCCATCTGGCA
 GATCGTGGACCCTCTGCACCGGACCATTGAGACATTTGCCAAGGAGGAACCTAA
 GGAAGATATTGACGTCTCTATTCTGCCCCAGCTGGAGCATTGCAGCTCCAGGAAG
 ATGAATACATGGCTTGGCATTCTTCTATGGTTACAAGGGGCTGCTGCTGCTGCTGG
 GAATCTTCCTTGCTTATGAGACCAAGAGTGTGTCCACTGAGAAGATCAATGATCA
 10 CCGGGCTGTGGGCATGGCTATCTACAATGTGGCAGTCCTGTGCCTCATCACTGCT
 CCTGTCAACCATGATTCTGTCCAGCCAGCAGGATGCAGCCTTTGCCTTTGCCTCTCT
 TGCCATAGTTTTCTCCTCCTATATCACTCTTGTTGTGCTCTTTGTGCCCAAGATGC
 GCAGGCTGATCACCCGAGGGGAATGGCAGTCGGAGGCGCAGGACACCATGAAG
 ACAGGGTCATCGACCAACAACAACGAGGAGGAGAAGTCCCGGCTGTTGGAGAA
 15 GGAGAACCCTGAACTGGAAAAGATCATTGCTGAGAAAGAGGAGCGTGTCTCTGA
 ACTGCGCCATCAACTCCAGTCTCGGCAGCAGCTCCGCTCCCGGCGCCACCCACCG
 ACACCCCCAGAACCCTCTGGGGGCCTGCCAGGGGACCCCTGAGCCCCCGAC
 CGGCTTAGCTGTGATGGGAGTCGAGTGCATTTGCTTTATAAGTGAGGGTAGGGTG
 AGGGAGGACAGGCCAGTAGGGGGAGGGAAAGGGAGAGGGGAAGGGCAGGGGA
 20 CTCAGGAAGCAGGGGGTCCCCATCCCCAGCTGGGAAGAACATGCTATCCAATCT
 CATCTCTTGTAATACATGTCCCCCTGTGAGTTCTGGGCTGATTTGGGTCTCTCAT
 TACCTCTGGGAAACAGACCTTTTCTCTCTTACTGCTTCATGTAATTTTGTATCACC
 TCTTCAACAATTTAGTTCTGTACCTGGCTTGAAGCTGCTCACTGCTCACACGCTGCCT
 CCTGAGCAGCCTCACTGCATCTTTCTCTTCCCATGCAACACCCCTCTTCTAGTTACC
 25 ACGGCAACCCCTGCAGCTCCTCTGCCTTTGTGCTCTGTTCCCTGTCCAGCAGGGGTC
 TCCCAACAAGTGCTCTTTCCACCCCAAAGGGGCCTCTCCTTTTCTCCACTGTCATA
 ATCTCTTTCCATCTTACTTGCCCTTCTATACTTTCTCACATGTGGCTCCCCCTGAAT
 TTTGCTTCCTTTGGGAGCTCATTCTTTTCGCCAAGGCTCACATGCTCCTTGCCCTCT
 GCTCTGTGCACTCACGCTCAGCACACATGCATCCTCCCCTCTCCTGCGTGTGCCCA
 30 CTGAACATGCTCATGTGTACACACGCTTTTCCCGTATGCTTTCTTCATGTTCACTC
 ACATGTGCTCTCGGGTGCCCTGCATTACAGCTACGTGTGCCCTCTCATGGTCAT
 GGGTCTGCCCTTGAGCGTGTGTTGGGTAGGCATGTGCAATTTGTCTAGCATGCTGA
 GTCATGTCTTTCTTATTGTCACACGCTCCATGTTTATCCATGTACTTTCCCTGTGTAC
 CCTCCATGTACCTTGTGTACTTTCTTCCCTTAAATCATGGTATTCTTCTGACAGAG
 35 CCATATGTACCCTACCCTGCACATTGTTATGCACTTTTCCCCAATTCATGTTTGGT
 GGGGCCATCCACACCCTCTCCTTGTACAGAATCTCCATTTCTGCTCAGATTCCCC
 CCATCTCCATTGCATTGATGTAATACCCTCAGTCTACACTCACAATCATCTTCTCC
 CAAGACTGCTCCCTTTTGTGTTTGTGTTTTTTGAGGGGAATTAAGGAAAAAATAAG
 TGGGGGCAGGTTTGGAGAGCTGCTTCCAGTGGATAGTTGATGAGAATCCTGACC
 40 AAAGGAAGGCACCCTTGACTGTTGGGATAGACAGATGGACCTATGGGGTGGGAG
 GTGGTGTCCCTTTCACACTGTGGTGTCTCTTGGGGAAGGATCTCCCCGAATCTCA
 ATAAACCAGTGAACAGTGTGACTCGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 700

45 zh96g08.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone
 IMAGE:429182 3', mRNA sequence gi|1448327|gb|AA004759.1|AA004759[1448327]
 ACTTTATGCAAAAAAAAAAATATACATTTATTTATAGGTCTCAATACAGCAAAATGA
 AAACGAAAATTGAGAACATTGCTCATTAGGCCAGCAACTTTAAATTTATTTAATT
 TGAAATATAAAATAGGTGGTCTTCATAAAAGATGCATGAAATTTACCTTACCTT

ATATTTTATACTTTAAGAGTACATTTTATACAAATCAGTAACCAGGCTTCTTTCAT
GTTTAACCTGAAATGAACGTAACATAAAATGAGTATCTTTCTTTTATGTAGTAGC
AAAAAGAGTCAATAATCCTTTTCAAGAAAGATACTATTTCAATTCCTCCCAACTTG
GGATTCNCCATAAACACGGA

5

SEQ ID NO: 701

Homo sapiens canalicular multispecific organic anion transporter 2 (CMOAT2) mRNA,
complete cds gi|3550323|gb|AF083552.1|AF083552[3550323]

AGCCGCGCCTCGGCCCCATGGACGCCCTGTGCGGTTCCGGGGAGCTCGGCTCCAA
10 GTTCTGGGACTCCAACCTGTCTGTGCACACAGAAAACCCGGACCTCACTCCCTGC
TTCCAGAACTCCCTGCTGGCCTGGGTGCCCTGCATCTACCTGTGGGTCGCCCTGC
CCTGCTACTTGCTCTACCTGCGGCACCATTTGTCGTGGCTACATCATCTCTCCAC
CTGTCCAAGCTCAAGATGGTCCTGGGTGTCCTGCTGTGGTGCGTCTCCTGGGCGG
ACCTTTTTTACTCCTTCCATGGCCTGGTCCATGGCCGGGCCCCCTGCCCTGTTTTT
15 TTTGTACCCCCCTTGGTGGTGGGGGTACCATGCTGCTGGCCACCCTGCTGATAC
AGTATGAGCGGCTGCAGGGCGTACAGTCTTCGGGGGTCTCATTATCTTCTGGTT
CCTGTGTGTGGTCTGCGCCATCGTCCCATTCGCTCCAAGATCCTTTTAGCCAAGG
CAGAGGGTGAGATCTCAGACCCCTTCCGCTTACCACCTTCTACATCCACTTTGC
CCTGGTACTCTCTGCCCTCATCTTGGCCTGCTTCAGGGAGAAACCTCCATTTTTCT
20 CCGCAAAGAATGTCGACCCTAACCCCTACCCTGAGACCAGCGCTGGCTTTCTCTC
CCGCCTGTTTTTCTGGTGGTTCACAAAGATGGCCATCTATGGCTACCGGCATCCC
CTGGAGGAGAAGGACCTCTGGTCCCTAAAGGAAGAGGACAGATCCCAGATGGTG
CTGGCAGCAGCTGCTGGAGGCATGGAGGAAGCAGGAAAAGCAGACGGCACGACA
CAAGGCTTCAGCAGCACCTGGGAAAAAATGCCTCCGGCGAGGACGAGGTGCTGCT
25 GGGTGCCCGGCCAGGCCCGGAAGCCCTCCTTCTGAAGGCCCTGCTGGCCACC
TTCGGCTCCAGCTTCCTCATCAGTGCCTGCTTCAAGCTTATCCAGGACCTGCTCTC
CTTCATCAATCCACAGCTGCTCAGCATCCTGATCAGGTTTATCTCCAACCCCATG
GGCCCTCCTGGTGGGGCTTCTGGTGGCTGGGCTGATGTTCTGTGCTCCATGA
TGCAGTCGCTGATCTTACAACACTATTACCACTACATCTTTGTGACTGGGGTGAA
30 GTTTCGTACTGGGATCATGGGTGTCATCTACAGGAAGGCTCTGGTTATCACCAAC
TCAGTCAAACGTGCGTCCACTGTGGGGGAAATTGTCAACCTCATGTGAGTGATG
CCCAGCGCTTCATGGACCTTGCCCCCTTCCTCAATCTGCTGTGGTCAGCACCCCTG
CAGATCATCCTGGCGATCTACTTCCTCTGGCAGAACCTAGGTCCCTCTGTCTGG
CTGGAGTCGCTTTTCATGGTCTTGCTGATTCCAACGAGCTGTGGCCGTGAA
35 GATGCGCGCCTTCCAGGTAAAGCAAATGAAATTGAAGGACTCGCGCATCAAGCT
GATGAGTGAGATCCTGAACGGCATCAAGGTGCTGAAGCTGTACGCCTGGGAGCC
CAGCTTCCTGAAGCAGGTGGAGGGCATCAGGCAGGGTGAGCTCCAGCTGCTGCG
CACGGCGGCCTACCTCCACACCACAACCACCTTCACCTGGATGTGCAGCCCCCTTC
TTGGTGACCCTGATCACCTCTGGGTGTACGTGTACGTGGACCCAAACAATGTGC
40 TGGACGCCGAGAAGGCCTTTGTGTCTGTGTCCTTGTTAATATCTTAAGACTTCCC
CTCAACATGCTGCCCCAGTTAATCAGCAACCTGACTCAGGCCAGTGTGTCTCTGA
AACGGATCCAGCAATTCTGAGCCAAGAGGAACCTGACCCCCAGAGTGTGGAAA
GAAAGACCATCTCCCCAGGCTATGCCATCACCATAACAGTGGCACCTTCACCTG
GGCCAGGACCTGCCCCCACTCTGCACAGCCTAGACATCCAGGTCCCGAAAGG
45 GGCACCTGGTGGCCGTGGTGGGGCCTGTGGGCTGTGGGAAGTCCTCCCTGGTGTCT
GCCCTGCTGGGAGAGATGGAGAAGCTAGAAGGCAAAGTGACATGAAGGGCTCC
GTGGCCTATGTGCCCCAGCAGGCATGGATCCAGAAGTCACTCTTCAGGAAAAC
GTGCTTTTCGGCAAAGCCCTGAACCCCAAGCGCTACCAGCAGACTCTGGAGGCCT
GTGCCTTGCTAGCTGACCTGGAGATGCTGCCTGGTGGGGATCAGACAGAGATTG

GAGAGAAGGGCATTAACTGTCTGGGGGCCAGCGGCAGCGGGTCAGTCTGGCTC
GAGCTGTTTACAGTGATGCCGATATTTTCTTGCTGGATGACCCACTGTCCGCGGT
GGACTCTCATGTGGCCAAGCACATCTTTGACCACGTCATCGGGCCAGAAGGCGTG
CTGGCAGGCAAGACGCGAGTGCTGGTGACGCACGGCATTAGCTTCCTGCCCCAG
5 ACAGACTTCATCATTGTGCTAGCTGATGGACAGGTGTCTGAGATGGGCCCCGTACC
CAGCCCTGCTGCAGCGCAACGGCTCCTTTGCCAACTTTCTCTGCAACTATGCCCC
CGATGAGGACCAAGGGCACCTGGAGGACAGCTGGACCGCGTTGGAAGGTGCAG
AGGATAAGGAGGCACTGCTGATTGAAGACACACTCAGCAACCACACGGATCTGA
CAGACAATGATCCAGTCACCTATGTGGTCCAGAAGCAGTTTATGAGACAGCTGA
10 GTGCCCTGTCCTCAGATGGGGAGGGACAGGGTCGGCCTGTACCCCGGAGGCACC
TGGGTCCATCAGAGAAGGTGCAGGTGACAGAGGGCGAAGGCAGATGGGGCACTG
ACCCAGGAGGAGAAAGCAGCCATTGGCACTGTGGAGCTCAGTGTGTTCTGGGAT
TATGCCAAGGCCGTGGGGCTCTGTACCACGCTGGCCATCTGTCTCCTGTATGTGG
GTCAAAGTGCGGCTGCCATTGGAGCCAATGTGTGGCTCAGTGCCTGGACAAATG
15 ATGCCATGGCAGACAGTAGACAGAACAACACTTCCCTGAGGCTGGGCGTCTATG
CTGCTTTAGGAATTCTGCAAGGGTTCTTGGTGATGCTGGCAGCCATGGCCATGGC
AGCGGGTGGCATCCAGGCTGCCCCGTGTGTTGCACCAGGCACTGCTGCACAACAA
GATACGCTCGCCACAGTCCTTCTTTGACACCACACCATCAGGCCGCATCCTGAAC
TGCTTCTCCAAGGACATCTATGTCGTTGATGAGGTTCTGGCCCCTGTCATCCTCAT
20 GCTGCTCAATTCTTCTTCAACGCCATCTCCACTCTTGTGGTCATCATGGCCAGCA
CGCCGCTCTTCACTGTGGTCATCCTGCCCCCTGGCTGTGCTCTACACCTTAGTGCAG
CGCTTCTATGCAGCCACATCACGGCAACTGAAGCGGGTGSAAATCAGTCAGCCGCT
CAGCTATCTACTCCCACTTTTCGGAGACAGTGAGTGGTGCCAGTGTCTCCGGGC
CTACAACCGCAGCCGGGATTTTGAGATCATCAGTGATACTAAGGTGGATGCCAA
25 CCAGAGAAGCTGCTACCCCTACATCATCTCCAACCGGTGGCTGAGCATCGGAGTG
GAGTTCGTGGGGAACCTGCGTGGTGCTCTTTGCTGCACTATTTGCCGTCATCGGGA
GGAGCAGCCTGAACCCGGGGCTGGTGGGCCTTTCTGTGTCTACTCCTTGCAAGT
GACATTTGCTCTGAACTGGATGATACGAATGATGTCAGATTTGGAATCTAACATC
GTGGCTGTGGAGAGGGTCAAGGAGTACTCCAAGACAGAGACAGAGGGCGCCCTGG
30 GTGGTGGAAGGCAGCCGCCCTCCCGAAGGTTGGCCCCACGTGGGGAGGTGGAG
TTCCGGAATTATTCTGTGCGCTACCGGCCGGGCCTAGACCTGGTGCTGAGAGACC
TGAGTCTGCATGTGCACGGTGGCGAGAAGGTGGGGATCGTGGGCCGCACTGGGG
CTGGCAAGTCTTCCATGACCCTTTGCCTGTTCCGCATCCTGGAGGCGGCAAAGGG
TGAAATCCGCATTGATGGCCTCAATGTGGCAGACATCGGCCTCCATGACGTGCGC
35 TCTCAGCTGACCATCATCCCGCAGGACCCCATCCTGTTCTCGGGGACCCTGCGCA
TGAACCTGGACCCCTTCGGCAGCTACTCAGAGGAGGACATTTGGTGGGCTTTGGA
GCTGTCCCACCTGCACACGTTTGTGAGCTCCAGCCGGCAGGCCTGGACTTCCAG
TGCTCAGAGGGCGGGGAGAATCTCAGCGTGGGCCAGAGGCAGCTCGTGTGCCTG
GCCCCAGCCCTGCTCCGCAAGAGCCGCATCCTGGTTTTAGACGAGGCCACAGCTG
40 CCATCGACCTGGAGACTGACAACCTCATCCAGGCTACCATCCGCACCCAGTTTGA
TACCTGCACTGTCCTGACCATCGCACACCGGCTTAACACTATCATGGACTACACC
AGGGTCTGGTCTCTGGACAAAGGAGTAGTAGCTGAATTTGATTCTCCAGCCAACC
TCATTGCAGCTAGAGGCATCTTCTACGGGATGGCCAGAGATGCTGGACTTGCCTA
AAATATATTCTGAGATTTCTCTCTGGCCTTTCTCTGGTTTTTCATCAGGAAGGAAAT
45 GACACCAAATATGTCCGCAGAATGGACTTGATAGCAAACACTGGGGGCACCTTA
AGATTTTGACCTGTAAAGTGCCTTACAGGGTAACTGTGCTGAATGCTTTAGATG
AGGAAATGATCCCCAAGTGGTGAATGACACGCCTAAGGTACAGCTAGTTTGAG
CCAGTTAGACTAGTCCCCGGTCTCCCGATTCCCAACTGAGTGTTATTTGCACACT
GCACTGTTTTCAAATAACGATTTTATGAAATGACCTCTGTCCTCCCTCTGATTTTT

CATATTTTCTAAAGTTTCGTTTCTGTTTTTAATAAAAAGCTTTTTCCTCCTGGAAC
AGAAGACAGCTGCTGGGTCAGGCCACCCCTAGGAACTCAGTCCTGTACTCTGGG
GTGCTGCCTGAATCCATTAAAAATGGGAGTACTGATGAAATAAACTACATGGT
CAACAGTAAAAAAAAAAAAAAAAA

5

SEQ ID NO: 702

yq42d10.s1 Soares fetal liver spleen 1 NFLS Homo sapiens cDNA clone IMAGE:198451 3',
mRNA sequence gi|970054|gb|R94659.1|R94659[970054]

TTGTTTTTTTTGGTTCAGCATAACTTGGAACATTTGAAAGCTTTTCAACCTAAATG
TGGG

10

GAAAAAACAGGTAAGGCATTATTTTTGCACAAACTAGCATTCTAATAGTGCA
AATGAA

TCTGATACCTCTTAAAATGGTGAGAGGTCATACACTTACTAGATTAATTTAGATT
TTCTT

15

TCTATGGCTTGACAAATTATCCCTCTATAAATTCTACTCTCACCCAGAGGCTGTTG
CTGT

AATCAAAAGGATAACTGTAGGATAAAGGTCCAACCTTCTCCTGGTATCCGGCAA
AAGGGT

TTTTGCTCATATGGCAAAAAAATCTAATTTTTAAATTATCCTACAGNGGAATAT
ACAAC

20

TGGGNTTCCTNGGGACCCTCTATTTATCNGGCGGCAACAGGTGGTTCGGGGCGGC

GGNCTTTCCAATGGGGGCCCCCTAACCCAAAATTGGGCGGNCAATCT

SEQ ID NO: 703

SEQ ID NO: 703

25

zd29f03.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:342077 3',
mRNA sequence gi|1367074|gb|W60315.1|W60315[1367074]

CATAACTTAAGTAAACTTTATTTTCAAATGCTTCAGGTACAAAAGAAAACAATC
GGCAAAGTCTAACAATAATTAACAAACCAGCTCTTGAGCGGCAGAGTGCTCCAG

30

GGATGAGAGGGGCTGGGGATGGAAAGGTGGTTGGGAGACACAACATTTTTCTAG
CTTCAGAAAGTCAGGGAGCCAGATCACAGCCTGAACTTCATGGTATTGGTTACA

GATTCTTTACAAAGGTGTTTACCTCTCTCATGAGGTCTTCTTGATTGGTTACTTCC
TCAGAAAAATCATCATTGACATCCAACACCAGCACTGGAATGTTTCATCAGAGCCT

CAAAGTGGAGCCTGTCACTTGTACACANGACCTCTCAAAGATCTGTACTGGCTTC
CTGGCCTGGTAAGAGTTCTCAGGGGAAG

35

SEQ ID NO: 704

yb54f05.r1 Stratagene ovary (#937217) Homo sapiens cDNA clone IMAGE:75009 5',
mRNA sequence gi|653755|gb|T51895.1|T51895[653755]

TTTCTACCGTCCTTGTCATAACTTTGTGTTGGAGGGAACCTGTTTCACTATGGCCT
CCTTTGCCCAAGTTGAAACAGGGGCCCATCATCATGTCTGTTTCCAGAACAGTGC

40

CTTGGTCATCCACATCCCCGGACCCCGCCTGGGGACCCCCAAGCTGTGTCTTAT
GAAGGGGTGTGGGGGTGAGGTAGTGAAAAGGGCGGTAGTTGGTGGTGGGACCC

AGAAACGGACGCCGGTGCTTGGGAGGGGTTCTTAAATTAATATTTTAAAAAAG
TAACTTTTTTTGTATTAAATTAATAAAGAAAATNGGGGACG

45

SEQ ID NO: 705

zx69a01.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:796680 3',
mRNA sequence gi|2185799|gb|AA460679.1|AA460679[2185799]

TACTCAGTCACCACCAGAAATTGTCCGAGTTATGAAATAGATTTCATTTTGAGAA

GTTACACATTTCAGTTTGTATTATGAACTAGCCTGTCTTGTCTTCTGCCTCTTGTAAGA
 AAAGAGCTAGGTCTTTATGCTGCTAGGACAAAATACTGTACATGAATTGGAGAA
 TAAGGAGGGGTCATCCTTCTCCCCGGTACCGGAACAAGAGAACAGTTAGTACAG
 AAATGGCTTTGGCACTTTAACCCTTAGACATTGTCCCAAACCTTGTTACTTGAGTA
 5 TTGTAGCCTCACCATGATTTTTTTTTTAACACCGTATCATCTCCATACTTTTTATTTA
 CAAATTATATATACACACAATAATAACAATTCCTTCATTCTAAAACAATAGTAGAC
 CCCAAACAGGTCTACATTAAGTTTC

SEQ ID NO: 706

10 zv64g11.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:758468 3',
 mRNA sequence gi|2046825|gb|AA393856.1|AA393856[2046825]
 TTTAACATCAGTTAAAGATTTTATTTGATTCATTAAAGAGGAACTGGTGAGGCA
 TTTCCACCAGCTCAAGGAAGAATTTTGTAATGTTATATTTATGGATCAGAAATA
 ACTGAAATGAATGTGCAAATGGAGGCAAACTGGCCTCTTCCACAGTGGGGAAG
 15 AAAGTCAACAGAACCTCCACTAGGCATAATTTACATATGTACAGACTCAATCAGC
 TTTTAATATAGAAAGATATTTGAACCCAAAATCTTTCATTAAGGTAAAAAATACA
 ATAATAATTTTAAATGAAATCCTGGAAAATTCATACAAATAAAATTTAAAGCCTC
 CAATGGGGTATAATCCAGCAATATCCTAGGCAAATGCCTCCTGAAGAACAACAG
 CCTTTTAAACATCACTGTTTATCATTCAAATTCAGACGTCTCCTATCTTTGGC
 20 TATTTTATCTCTTCAACT

SEQ ID NO: 707

aa47b01.r1.NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:824041 5' similar to
 TR:G1049078 G1049078 SRP30C3, mRNA sequence
 25 gi|2219894|gb|AA490721.1|AA490721[2219894]
 TATCTCAGAAAAGAAGACATGCGATATGCCCTGCGTAAACTGGATGACACCAAA
 TTCCGCTCTCATGAGGGTGAACTTCCTACATCCGAGTTTATCCTGAGAGAAGCA
 CCAGCTATGGCTACTCACGGTCTCGGTCTGGGTCAAGGGGCCGTGACTCTCCATA
 CCAAAGCAGGGGTTCCCACACTACTTCTCTCCTTTCAGGCCCTACTGAGACAGGT
 30 GATGGGAATTTTTTCTTTATTTTTTAGGTAACTGAGCTGCTTTGTGCTCAGAATC
 TACATTCCAGATTGAGGATTTAGTGTCTTAGGAAATTTTTTAATTTTTTTTTTTAA
 AA

SEQ ID NO: 708

35 Human 78 kdalton glucose-regulated protein (GRP78) gene, complete cds
 gi|183644|gb|M19645.1|HUMGRP78[183644]
 CCCGGGGTCACTCCTGCTGGACCTACTCCGACCCCTAGGCCGGGAGTGAAGGC
 GGGACTTGTGCGGTTACCAGCGGAAATGCCTCGGGGTCAGAAGTCGCAGGAGAG
 ATAGACAGCTGCTGAACCAATGGGACCAGCGGATGGGGCGGATGTTATCTACCA
 40 TTGGTGAACGTTAGAAACGAATAGCAGCCAATGAATCAGCTGGGGGGGCGGAGC
 AGTGACGTTTATTGCGGAGGGGGCCGCTTCGAATCGGCGGCGGCCAGCTTGGTG
 GCCTGGGCCAATGAACGGCCTCCAACGAGCAGGGCCTTCACCAATCGGCGGCCT
 CCACGACGGGGCTGGGGGAGGGTATATAAGCCGAGTAGGCGACGGTGAGGTGCG
 ACGCCGGCCAAGACAGCACAGACAGATTGACCTATTGGGGTGTTTCGCGAGTGT
 45 GAGAGGGAAGCGCCGCGGCCTGTATTTCTAGACCTGCCCTTCGCCTGGTTCGTGG
 CGCCTTGTGACCCCGGGCCCTGCCGCTGCAAGTCGAAATTGCGCTGTGCTCCT
 GTGCTACGGCCTGTGGCTGGACTGCCTGCTGCTGCTGCTCAGCGCGGCGCGGGCCGAGG
 AGCTCTCCCTGGTGGCCGCGATGCTGCTGCTGCTCAGCGCGGCGCGGGCCGAGG
 AGGAGGACAAGAAGGAGGACGTGGGCACGGTGGTCGGCATCGACTTGGGGACC

ACCTACTCCTGGTAAGTGGGGTTGCGGATGAGGGGGACGGGGCGTGGCGCTGGC
TGGCGTGAGAAGTGCGGTGCTGATGTCCCTCTGTCGGGTTTTTGCAGCGTCGGCG
TGTTCAAGAACGGCCGCGTGGAGATCATCGCCAACGATCAGGGCAACCGCATCA
CGCCGTCCTATGTCGCCTTCACTCCTGAAGGGGAACGTCTGATTGGCGATGCCGC
5 CAAGAACCAGCTCACCTCCAACCCCGAGAACACGGTCTTTGACGCCAAGCGGCT
CATCGGCCGCACGTGGAATGACCCGTCTGTGCAGCAGGACATCAAGTTCTTGCCG
TTCAAGGTTTCGACCGGTTTTCTCATCCAGTTAGAGAACGGGTGGGTGGTGGGAG
TATTTAGAGTTATAAGTCTCTGGAAGAGTGTGAGACAACAGTTGAAGGTTATAG
ACATGATGTATGTAATAACTTTAATACTATTAGTATGTTACAAAACCTTAAGACAG
10 TTGCTGTCGTACTGTCTACGATAGTTTAGGAATAAAAGACCGATTAAACTGAAC
TTTGTAAGACACCTATACTCCCTGAAGTATTTCTAGTCAATTTGCAGCCCCAAGG
GACCAAAATAAACCAAATTGTGGGGATGGTAGTGGGTCTTTTAAACTTTGAGATG
TCATTGTATCTGTGTCTGAAAACAATAATTCTTTAAATAGGTGGTTGAAAAGAA
AACTAAACCATAACATTCAAGTTGATATTGGAGGTGGGCAAACAAAGACATTTGC
15 TCCTGAAGAAATTTCTGCCATGGTTCTCACTAAAATGAAAGAAACCGCTGAGGCT
TATTTGGGAAAGAAGGTAAATATTTCTAGAACAATGTTAAGTATTTTTTGATCAT
TAGTATTCTCGGTTGGCTGTTATGTATAGAAGCCTTCGTGAAGGGTTTCAAAAAT
TTAATCAGAATGGTATTCATGCTTGTCACGGTTTAATTATTGAGTCCCTTTACTA
TAAGCCAAACAAAAATAGACTTTTCATGTATTATTTAATGCTTACAATTCCAGGA
20 ACAATAAAATTTTATATGTTGTATTTCATCAATAATTGGCTTAAAACTAAAGTGA
TGGTTTGACTGTAATTTTTTTTTTTTGGAGATGGAGTCTTGCTCTGTTGCCCAGGCT
GGACTGCAGTGGCACGATCTCAGCTCACTGCAACCTCTGCCTCCCGGGTTAAGCA
GCTCTCCTGCCTCAGCCTCCAAGTAATGGAACGACAGGCACACCACACAGGTG
GCTAATTTTTTTTTTTTTTTTAAATTTTCAGTAGAGACAGGGTTTCTCCACATTGCC
25 AGGCTGGTCTTGAAATCCTGCCCTCAGGTTGATCCTCCTGCCTAGCCTCCCAAAG
TGCTGGATTATAGGCAGAAGCCACCGCCTGGCCAGACTGTAATTTAAATAAGGG
TTAAACTATGTGACAATACACTTAATTATCTTTATCCTTTTAGGTTACCCATGCAG
TTGTTACTGTACCAGCCTATTTTAATGATGCCCAACGCCAAGCAACCAAAGACGC
TGGAACCTATTGCTGGCCTAAATGTTATGAGGATCATCAACGAGCCGTAAGTATGA
30 AATTCAGGGATACGGCATATTTGCCAAATAGTGGAATGTGAAGTACTGACAAA
ACTTTTCCCTTTTCAATCTAATAGTACGGCAGCTGCTATTGCTTATGGCCTGGAT
AAGAGGGAGGGGGAGAAGAACATCCTGGTGTGTTGACCTGGGTGGCGGAACCTTC
GATGTGTCTCTTCTCACCATTGACAATGGTGTCTTCGAAGTTGTGGCCACTAATG
GAGATACTCATCTGGGTGGAGAAGACTTTGACCAGCGTGTGCATGGAACACTTCAT
35 CAACTGTACAAAAAGAAGACGGGCAAAGATGTCAGGAAGGACAATAGAGCTG
TGCAGAAACTCCGGCGCGAGGTAGAAAAGGCCAAGGCCCTGTCTTCTCAGCATC
AAGCAAGAATTGAAATTGAGTCCTTCTATGAAGGAGAAGACTTTTCTGAGACCCT
GACTCGGGCCAAATTTGAAGAGCTCAACATGGTATGTTCTTGTGTTTCTGCTTTGC
TAATGAGATCTCCTTAGACTCTGAATTCAGGACATTGCATCTAGATACTTAGATA
40 ACAGACATCACAGTAACCATGTCTTTTTTCTAGGATCTGTTCCGGTCTACTATGAA
GCCCGTCCAGAAAGTGTTGGAAGATTCTGATTTGAAGAAGTCTGATATTGATGAA
ATTGTTCTTGTTGGTGGCTCGACTCGAATTCCAAAGATTGAGCAACTGGTTAAAG
AGTTCTTCAATGGCAAGGAACCATCCCGTGGCATAAACCAGATGAAGCTGTAG
CGTATGGTGCTGCTGTCCAGGCTGGTGTGCTCTCTGGTGATCAAGATACAGGTAG
45 GTCATCATCGCAGCATCTTCTTAGTGATTGAGTAGCTTGATGGAAGAGCTCGGT
ACCCCTATTGCTTTAGAAAATACCAGAATATGAGCAACAAGGTCACACAGCTAG
TAAAGGGTATAAGTGAAGACAAGACTGGGGTAGTCTCCAAGATCATTAGCAACT
GTTTAATTCAGTGCCTTTAAATGTGTGTGTTAGAACCTAACCAAATGTTAGAGA
GATAAACTTTACATAGCTCATAGGGAGAAGTTGAATTTAAAGTTAAATAACTTAT

CCTTACAGGTGACCTGGTACTGCTTCATGTATGTCCCCTTACACTTGGTATTGAAA
 CTGTAGGAGGTGTCATGACCAAAGTATTCCAAGTAATACAGTGGTGCCTACCAA
 GAACTCTCAGATCTTTTCTACAGCTTCTGATAATCAACCAACTGTTACAATCAAG
 GTCTATGAAGGTAATTACCTTAAGTTTGGTTAATATCATGGCTTTTTTTTGTAGAT
 5 GAAGTCTTGCTCTGTTGCCAGGCTGGACTGCAGTGGCACGATCTCGGCTCACTG
 CAAATTCTGTCTCCCGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCAGAGTAGCT
 GGATTACAGCCTGACCACCACACCTGGCTAATTTCTGTATTTTGTAGTAGAGGATG
 GGCTTTCACCATGTTTCCCAGGCTGGTCTCCAACCTCCTGACCTCAGGTCATCTGCC
 TGCCTCCACCGTCCCGAAAGTACTGGGATTATAGCGTGAGCCACCACGCCAGATC
 10 TATCTATCATGGCATATTTTAAAAGAACATGACTTAATATGTCCTATTGAAATGG
 CTAGGGAACATAAGTAACTGCTGTTTTTCAGATGGAGGTCTTAATTTGAATAATGTT
 GATATTAGATATTTAGCATTCTTTTTTTTTTTTTTTTAAATGGAGTCTTGCTCTGTCG
 CCTAGGCTGGGGTGCAGTGGCATGACTTGCAACCTCTGCCTCCCGAATAGCTGGG
 ATTACAGGTGCCACCACATCACGCCCCGGCTAAGTTTTGTATTTTGTAGTAGAGGCGA
 15 GTTTCGCCATGTTGGCCAGGCTGGTCTTGAACCCCTAACCTCAGTGATCCACGG
 TCACCGACCTGGCCTCCCAAAGTACTGTACCCAGCCAATGATTAGCATTCTCAC
 TAATAATAGCATCTGAGCTGGCTCCTAGAGTACAAGAAAAAGGAGTTCACAGTA
 CTTTAAAATAGATAAAATTCAGTTGAGTTAGTAACCTAACTCATTGTTAGTACTA
 GTTGCTGCTCCTTGTAGACCAATATGAAATTACTTTTAGCTCGATAAAACCAAAA
 20 GTGTCACCTTATGCTTCAGACTGAAATGCGGGGATCTAGATGTGCTAATGCTTGT
 CAGTAACAACATAACAAGTTTTTCTGTATGTAACCTTCTAGGTGAAAGACCCCTGAC
 TAAAAGACAATCATCTTCTGGGTACATTTGATCTGACTGGAATTCCTCCTGCTCCTC
 GTGGGGTCCCACAGATTGAAGTCACTTTGAGATAGATGTGAATGGTATTCTTCG
 AGTGACAGCTGAAGACAAGGGGTACAGGGGAACAAAAATAAGATGACAATCACCA
 25 ATGACCAGAATCGCCTGACACCTGAAGAAATCGAAAGGATGGTTAATGATGCTG
 AGAAGTTTGCTGAGGAAGACAAAAAGCTGAAGGAGCGCATTGATACTAGAAATG
 AGTTGGAAAGCTATGCCTATTCTCTAAAGAATCAGATTGGAGATAAAGAAAAAGC
 TGGGAGGTAAACTTTCTCTGAAGATAAGGAGACCATGGAAAAAGCTGTAGAAG
 AAAAGATTGAATGGCTGGAAAGCCACCAAGATGCTGACATTGAAGACTTCAAAG
 30 CTAAGAAGAAGGAACCTGGAAGAAATTGTTCAACCAATTATCAGCAAACCTCTATG
 GAAGTGCAGGCCCTCCCCCAACTGGTGAAGAGGATACAGCAGAAAAAGATGAGT
 TGTAAGACACTGATCTGCTAGTGCTGTAATATTGTAATACTGGACTCAGGAACCTT
 TTGTTAGGAAAAAATTGAAAGAACTTAAGTCTCGAATGTAATTGGAATCTTCACC
 TCAGAGTGGAGTTGAAACTGCTATAGCCTAAGCGGCTGTTTACTGCTTTTCATTA
 35 GCAGTTGCTCACATGTCTTTGGGTGGGGGGGAGAAGAAGAATTGGCCATCTTAA
 AAAGCGGGTAAAAAACCTGGGTAGGGTGTGTGTTACCTTCAAAATGTTCTATT
 TAACAACCTGGGTCATGTGCATCTGGTGTAGGAGGTTTTTTCTACCATAAGTGACA
 CCAATAAATGTTTGTATTATTACACTGGTCTAATGTTTGTGAGAAGCTT

40 SEQ ID NO: 709

Human adenosine receptor (A2) gene, complete cds

gi|177891|gb|M97370.1|HUMA2XXX[177891]

GGCACGAGGCTGGCTGAGCCATGATGCTGCTGCCAGAACCCCTGCAGAGGGCCT
 GGTTCAGGAGACTCAGAGTCCTCTGTGAAAAAGCCCTTGGAGAGGCGCCCCAG
 45 CAGGGCTGCACTTGGCTCCTGTGAGGAAGGGGCTCAGGGTCTGGGCCCCCTCCGCC
 TGGGCCGGGCTGGGAGCCAGGCGGGCGGCTGGGCTGCAGCAATGGACCGTGAGC
 TGGCCCAGCCCGCGTCCGTGCTGAGCCTGCCTGTGCTGTGGCCATGCCATCAT
 GGGCTCCTCGGTGTACATCACGGTGGAGCTGGCCATTGCTGTGCTGGCCATCCTG
 GGCAATGTGCTGGTGTGCTGGGCGGTGTGGCTCAACAGCAACCTGCAGAACGTC

ACCAACTACTTTGTGGTGTCACTGGCGGCGGCCGACATCGCAGTGGGTGTGCTCG
 CCATCCCCCTTTGCCATCACCATCAGCACCGGGTTCTGCGCTGCCTGCCACGGCTG
 CCTCTTCATTGCCTGCTTCGTCCTGGTCCTCACGCAGAGCTCCATCTTCAGTCTCC
 TGGCCATCGCCATTGACCGCTACATTGCCATCCGCATCCCGCTCCGGTACAATGG
 5 CTTGGTGACCGGCACGAGGGCTAAGGGCATCATTGCCATCTGCTGGGTGCTGTCG
 TTTGCCATCGGCCTGACTCCCATGCTAGGTTGGAACAAGTGGGTGAGCCAAAGG
 AGGGCAAGAACCACTCCCAGGGCTGCGGGGAGGGCCAAGTGGCCTGTCTCTTTG
 AGGATGTGGTCCCCATGAAC TACATGGTGTACTTCAACTTCTTTGCCTGTGTGCTG
 GTGCCCCCTGCTGCTCATGCTGGGTGTCTATTTGCGGATCTTCCTGGCGGCGCGAC
 10 GACAGCTGAAGCAGATGGAGAGCCAGCCTCTGCCGGGGGAGCGGGCACGGTCCA
 CACTGCAGAAGGAGGTCCATGCTGCCAAGTCACTGGCCATCATTGTGGGGCTCTT
 TGCCCTCTGCTGGCTGCCCCCTACACATCATCAACTGCTTCACTTTCTTCTGCCCCG
 ACTGCAGCCACGCCCCCTCTCTGGCTCATGTACCTGGCCATCGTCCTCTCCACACC
 AATTCCGTTGTGAATCCCTTCATCTACGCCTACCGTATCCGCGAGTTCCGCCAGA
 15 CCTTCCGCAAGATCATTTCGCAGCCACGTCCTGAGGCAGCAAGAACCTTTCAAGGC
 AGCTGGCACCAAGTGCCCCGGGTCTTGGCAGCTCATGGCAGTGACGGAGAGCAGGT
 CAGCCTCCGTCTCAACGGCCACCCGCCAGGAGTGTGGGCCAACGGCAGTGCTCC
 CCACCCTGAGCGGAGGCCCAATGGCTATGCCCTGGGGCTGGTGAGTGGAGGGAG
 TGCCCAAGAGTCCCAGGGGAACACGGGCCTCCCAGACGTGGAGCTCCTTAGCCA
 20 TGAGCTCAAGGGAGTGTGCCCAGAGCCCCCTGGCCTAGATGACCCCTGGCCCA
 GGATGGAGCAGGAGTGTCTGATGATTTCATGGAGTTTGCCCTTCTTAAGGGAAG
 GAGATCTTTATCTTTCTGGTTGGCTTGACCAAGTCAAGTTGGGAGAAGAGAGAGAG
 TGCCAGGAGACCCTGAGGGCAGCGGGTTCTTACTTTGGACTGAGAGAAGGGAGC
 GCGCAGGCTGGAGCAGCATGAGGCCAGCAAGAAGGGCTTGGGTTCTGAGGAAGC
 25 AGATGTTTCATGCTGTGAGGCCTTGCACCAGGTGGGGGCCACAGCACCAAGCAGC
 ATCTTTGCTGGGCAGGGCCCAGCCCTCCACTGCAGAAGCATCTGGAAGCACCACC
 TTGTCTCCACAGAGCAGCTTGGGCACAGCAGACTGGCCTGGCCCTGAGACTGGG
 GAGTGGCTCCAACAGCCTCCTGCCACCCACACACCACTCTCCCTAGACTCTCCTA
 GGGTTCAGGAGCTGCTGGGCCCAGAGGTGACATTTGACTTTTTTCCAGGAAAAAT
 30 GTAAGTGTGAGGAAACCCTTTTTATTTTATTACCTTTCACTCTCTGGCTGCTGGGT
 CTGCCGTCGGTCTCTGCTGCTAACCTGGCACCAAGAGCCTCTGCCGGGGAGCCTCAG
 GCAGTCTCTCCTGCTGTACAGCTGCCATCCACTTCTCAGTCCCAGGGCCATCTC
 TTGGAGTGACAAAGCTGGGATCAAGGACAGGGAGTTGTAACAGAGCAGTGCCAG
 AGCATGGGCCAGGTCCCAGGGGAGAGGTTGGGGCTGGCAGGCCACTGGCATGT
 35 GCTGAGTAGCGCAGAGCTACCCAGTGAGAGGCCTTGTCTAACTGCCTTTCCTTCT
 AAAGGGAATGTTTTTTCTGAGATAAAATAAAAACGAGCCACATCGTGTTTTAAG
 CTTGTCCAAATGAAAAAAAAAAAAAAAAAAAA/

SEQ ID NO: 710

40 za59g01.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:296880 5'
 similar to gb:M64925 55 KD ERYTHROCYTE MEMBRANE PROTEIN (HUMAN);,
 mRNA sequence gi|1273219|gb|W01240.1|W01240[1273219]
 GAGGAACATCTCTGCCAATGAGTTCTTGGAGTTTGGCAGCTACCAAGGCAACATG
 TTTGGCACCAAATTTGAAACAGTGCACCAGATCCATAAGCAGAACAAGATTGCC
 45 ATCCTTGACATTGAGCCCCAGACCCTGAAAATTGTTTCGGACAGCAGAACTTTCGC
 CTTTCATTGTGTTCAATTGCACCTACTGACCAGGGCACTCAGACAGAAGCCCTGCA
 GCAGCTGCAGAAGGACTCTGAGGCCATCCGCAGCCAGTACGCTCACTACTTTGAC
 CTCTCACTGGTCAATAATGGTGTGATGAAACCCTTAANGAAATTACAAGAAGCC
 TTCGACCAAGCGTGCAGTTCTCCACAGTGGGGTGGCTGGTCTCCTGGGGTTTACT

SEQ ID NO: 711

SEO ID NO: 712

AACTAATATTAAATAGTAAATTTAATGTGTATTAATATTGTCATATAATATTGNN
ATTACTCATGTAAATGTAAATATTACATTGAGGATATAGTAAATAATTAAATTTAC
TATGTCATTGAGGACAGTATTTCAAAGTCTTTTAAAAAGAAAAACAGAAGA
TGGCAGTGAATAGAACAGTGATTGTTCCATACTACTTGGATCTACTGCCTTAATTT
ATACTAGGATGTCAATCCACCATTGATTTTGGACCATCAGTGCCAATGTCNACGT
AGCCAAAAAGGCCAAT

SEO ID NO: 713

GAGACATTCCCTCAATTGCTTAGACATATTCTGAGCCTACAGCAGAGGAACCTCCA
GTCTCAGCACCATGAATCAAACCTGCGATTCTGATTTGCTGCCTTATCTTTCTGACT
CTAAGTGGCATTCAAGGAGTACCTCTCTCTAGAACCGTACGCTGTACCTGCATCA
GCATTAGTAATCAACCTGTTAATCCAAGGTCTTTAGAAAACTTGAAATTATTCC
TGCAAGCCAATTTTGTCCACGTGTTGAGATCATTGCTACAATGAAAAAGAAGGGT
GAGAAGAGATGTCTGAATCCAGAATCGAAGGCCATCAAGAATTTACTGAAAGCA
GTTAGCAAGGAAATGTCTAAAAGATCTCCTTAAAACCAGAGGGGAGCAAAATCG
ATGCAGTGCTTCCAAGGATGGACCACACAGAGGCTGCCTCTCCCATCACTTCCCT
ACATGGAGTATATGTCAAGCCATAATTGTTCTTAGTTTGCAGTTACACTAAAAGG
TGACCAATGATGGTCACCAAATCAGCTGCTACTACTCCTGTAGGAAGGTTAATGT
TCATCATCCTAAGCTATTCAGTAATAACTCTACCCTGGCACTATAATGTAAGCTCT
ACTGAGGTGCTATGTTCTTAGTGGATGTTCTGACCCTGCTTCAAATATTTCCCTCA
CCTTTCCCATCTTCCAAGGGTACTAAGGAATCTTTCTGCTTTGGGGTTTATCAGAA
TTCTCAGAATCTCAAATAACTAAAAGGTATGCAATCAAATCTGCTTTTTAAAGAA
TGCTCTTTACTTCATGGACTTCCACTGCCATCCTCCCAAGGGGCCCAAATTCTTTC
AGTGGCTACCTACATACAATTCCAAACACATACAGGAAGGTAGAAATATCTGAA
AATGTATGTGTAAGTATTCTTATTTAATGAAAGACTGTACAAAGTATAAGTCTTA
GATGTATATATTTCCCTATATTGTTTTTCAGTGTACATGGAATAACATGTAATTAAGT

ACTATGTATCAATGAGTAACAGGAAAATTTTAAAAATACAGATAGATATATGCTC
TGCATGTTACATAAGATAAATGTGCTGAATGGTTTTCAAATAAAAATGAGGTACT
CTCCTGGAAATATTAAGAAAGACTATCTAAATGTTGAAAGATCAAAAGGTTAAT
AAAGTAATTATAACT

5

SEQ ID NO: 714

ab21g06.r1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:841498 5' similar
to gb:X54304 MYOSIN REGULATORY LIGHT CHAIN 2, NONSARCOMERIC
(HUMAN);, mRNA sequence gi|2217534|gb|AA487370.1|AA487370[2217534]

10 ACAAGGAAGATTTGCATGATATGCTTGCTTCTCTAGGGAAGAATCCCACTGATGC
ATACCTTGATGCCATGATGAATGAGGCCCCAGGGCCATTCAATTTACCATGTTC
CTGACCATGTTTGGTGAGAAGTTAAATGGCACAGATCCTGAAGATGTCATCAGA
AACGCCTTTGCTTGCTTTGATGAAGAAGCAACAGGCACCATTTCAGGAAGATTACC
15 TAAGAGAGCTGCTGACAACCATGGGGGATCGGTTTACAGATGAGGAAGTGGATG
AGCTGTACAGAGAAGCACCTATTGACAAAAAGGGGAATTTCAATTACATCGAGT
TCACACGCATCCTGAAACATGGAGCCAAAGACAAAGATGACTGAAAGAACTTTA
G

SEQ ID NO: 715

20 H.sapiens mRNA for central cannabinoid receptor

gi|736236|emb|X81120.1|HSCANN6[736236]

TCGGCTTATTTGTTTTCCCTCCTCTTAGGATTGCCCCCTGTGGGTCACTTTCTCAGT
CATTTTGAGCTCAGCCTAATCAAAGACTGAGGTTATGAAGTCGATCCTAGATGGC
CTTGACAGATAACACCTTCCGGACCATCACCACTGACCTCCTGTACGTGGGCTCAA
25 ATGACATTCAGTACGAAGACATCAAAGGTGACATGGCATCCAAATTAGGGTACT
TCCCACAGAAATTCCCTTTAACTTCCTTTAGGGGAAGTCCCTTCCAAGAGAAGAT
GACTGCGGGAGACAACCCCCAGCTAGTCCCAGCAGACCAGGTGAACATTACAGA
ATTTTACAACAAGTCTCTCTCGTCCTTCAAGGAGAATGAGGAGAACATCCAGTGT
GGGGAGAACTTCATGGACATAGAGTGTTTCATGGTCCTGAACCCCAGCCAGCAG
30 CTGGCCATTGCAGTCCTGTCCCTCACGCTGGGCACCTTCACGGTCCTGGAGAACC
TCCTGGTGCTGTGCGTCATCCTCCACTCCCGCAGCCTCCGCTGCAGGCCTTCCTAC
CACTTCATCGGCAGCCTGGCGGTGGCAGACCTCCTGGGGAGTGTCATTTTTGTCT
ACAGCTTCATTGACTTCCACGTGTTCCACCGCAAAGATAGCCGCAACGTGTTTCT
GTTCAAACCTGGGTGGGGTCACGGCCTCCTTCACTGCCTCCGTGGGCAGCCTGTTC
35 CTCACAGCCATCGACAGGTACATATCCATTACAGGCCCTGGCCTATAAGAGGA
TTGTCACCAGGCCCAAGGCCGTGGTGGCGTTTTGCCTGATGTGGACCATAGCCAT
TGTGATCGCCGTGCTGCCTCTCCTGGGCTGGAACCTGCGAGAACTGCAATCTGTT
TGCTCAGACATTTTCCACACATTGATGAAACCTACCTGATGTTCTGGATCGGGG
TCACCAGCGTACTGCTTCTGTTTCATCGTGTATGCGTACATGTATATTCTCTGGAAG
40 GCTCACAGCCACGCCGTCCGCATGATTCAGCGTGGCACCCAGAAGAGCATCATC
ATCCACACGTCTGAGGATGGGAAGGTACAGGTGACCCGGCCAGACCAAGCCCGC
ATGGACATTAGGTTAGCCAAGACCCTGGTCCTGATCCTGGTGGTGTGATCATCT
GCTGGGGCCCTCTGCTTGCAATCATGGTGTATGATGTCTTTGGGAAGATGAACAA
GCTCATTAAGACGGTGTTTGCATTCTGCAGTATGCTCTGCCTGCTGAACTCCACC
45 GTGAACCCCATCATCTATGCTCTGAGGAGTAAGGACCTGCGACACGCTTCCGGA
GCATGTTTCCCTCTTGTGAAGGCACTGCGCAGCCTCTGGATAACAGCATGGGGGA
CTCGGACTGCCTGCACAAACACGCAAACAATGCAGCCAGTGTTTCACAGGGCCGC
AGAAAGCTGCATCAAGAGCACAGTCAAGATTGCCAAGGTAACCATGTCTGTGTC
CACAGACACGTCTGCCGAGGCTCTGTGAGCCTGATGCCTCCCTGGCAGCACAGG

AAAAGAATTTTTTTTTTTAAGCTCAAAATCTAGAAGAGTCTATTGTCTCCTTGGTT
 ATATTTTTTTAACTTTACCATGCTCAATGAAAAGGTGATTGTCACCATGATCACTT
 ATCAGTTTGGCTAATGTTTCCATAGTTTAGGTACTCAAACCTCCATTCTCCAGGGGTT
 TACAGTGAAGAAAGCCTGTTGTTAAGTGACTGAACGATCCTTCAAAGTCTCAAT
 5 GAAATAGGAGGGAAACCTTTGGCTACACAATTGGAAGTCTAAGAACCCATGGAA
 AAATGCCATCAAATGAATAATGCCTTTGTAACCACAACCTTCACTATAATGTGAA
 ATGTAAGTGTCCGTAGTATCAGAGATGTCCATTTTTACAAGTTATAGTACTAGAG
 ATATTTTGTAATAATGTATTATGTCCTGTGAGATGTGTATCAGTGTATGTGCTAT
 TAATATTTGTTTAGTTTCAGCCAACTGAAAGGTAGACTTTTATGAGAACAATGGA
 10 CAAGCAGTGGATACGTGTCAATGTGTGCACTTTTTTCTATATTATTGCCCATGAT
 ATAACCTTTAGAAATAAACCTTAATATTTCTTCCCAAAAAAAAAAAAA

SEQ ID NO: 716

Human mRNA for dihydropteridine reductase (hDHPR)

15 gi|30818|emb|X04882.1|HSDHPR[30818]
 CGGAGCCGGGCTGGCAGGAGCAGGATGGCGGCGGCGGCGGCTGCAGGCGAGGC
 GCGCCGGGTGCTGGTGTACGGCGGCAGGGGCGCTCTGGGTTCTCGATGCGTGCA
 GGCTTTTCGGGCCCCGCAACTGGTGGGTGCCAGCGTTGATGTGGTGGAGAATGAA
 GAGGCCAGCGCTACGATCATTGTTAAAATGACAGACTCGTTCCTGAGCAGGCT
 20 GACCAGGTGACTGCTGAGGTTGGAAAGCTCTTGGGTGAAGAGAAGGTGGATGCA
 ATTCTTTGCGTTGCTGGAGGATGGGCCGGGGGCAATGCCAAATCCAAGTCTCTCT
 TTAAGAAGTGTGACCTGATGTGGAAGCAGAGCATATGGACATCGACCATCTCCA
 GCCATCTGGCTACCAAGCATCTCAAGGAAGGAGGCTCCTGACCTTGGCTGGCGC
 AAAGGCTGCCCTGGATGGGACTCCTGGTATGATCGGGTACGGCATGGCCAAGGG
 25 TGCTGTTCAACAGCTCTGCCAGAGCCTGGCTGGGAAGAACAGCGGCATGCCGCC
 CGGGGCAGCCGCCATCGCTGTGCTCCCGGTTACCCTGGATACCCCGATGAACAGG
 AAATCAATGCCTGAGGCTGACTTCAGCTCCTGGACACCCTTAGAATTCCTAGTTG
 AAATTTCCATGACTGGATCACAGGGAAAAACCGACCGAGCTCAGGAAGCCTAA
 TCCAGGTGGTAACCACAGAAGGAAGGACGGAACCTACCCCAGCATATTTTTAGG
 30 CCTCATCTCAGTGCCTATGAGGGGCTGCCAGAAAAGTCACTAACCTGTCTCAGT
 GTGGCCTTGTCCAGCCTTGTGTTTTCTGTAAACCCTGTTTGTGGTACGAGATAATG
 AGTCCTATTTTTCTCTCACATAATATGCATTTGCTCTCCTAGGACAGTGTAATACA
 TTTATGTGAAGTAAAGACATGCGAGACTGGTGGCCTGCAAATAGCATCCGTCAAT
 CTGTGTTAACTGCATAGGGAGGGCTCTGCATAGCACCTGCTATAGCGGTGTCATG
 35 TTGGATCGCTTTTGTGACTGTTTCATCTGTCTTGACAGTGGCTGTCTCTTGACTA
 CTTTGTGATTGTTGGTATTGGGGACATTTTAAAGGCTGAGTTATTTTTGAATGT
 CATGTTTATGTCATAGACGTAGTTTTTCGCATCCTTGAATTAACTGCCTTAACTCC
 TTTTGTGGTAT

40 SEQ ID NO: 717

aa24g12.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:814246 5' similar to
 gb:D00762 PROTEASOME COMPONENT C8 (HUMAN);, mRNA sequence

gi|2191760|gb|AA465593.1|AA465593[2191760]
 CGATGACTCAATCGGCACTGGGTATGACCTGTCAGCCTCTACATTCTCTCCTGAC
 45 GGAAGAGTTTTTCAAGTTGAATATGCTATGAAGGCTGTGGAAAATAGTAGTACA
 GCTATTGGAATCAGATGCAAAGATGGTGTGTCTTTGGGGTAGAAAAATTAGTCC
 TTTCTAACTTTATGAAGAAGGTTCCAACAAAAGACTTTTAAATGTTGATCGGCA
 TGTTGGAATGGCAGTAGCAGGTTTGTGGCAGATGCTCGTTCTTTAGCAGACATA
 GCAAGAGAAGAAGCTTCCAACCTCAGATCTAACTTTGGCTACAACATTCCACTAA

AACATCTTGCAGACAGAGTGGCCATGTATGTGCATGCATATACACTCTACAGTGC
TGTTAGACCTTTTGGGCTGCAGTTTCA

SEQ ID NO: 718

- 5 zx10e07.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:786084 3',
mRNA sequence gi|2162337|gb|AA448667.1|AA448667[2162337]
ATAAATCTATAGTTTTATTAAGACAAAACTGACAATGTAGTATGAAGTTTACAT
TAAAA
CAAAGTTTACACAGGAATCTAACACATGCCTAAAAGAATTTTACAACGTAGCTCT
10 AGATGCAAGTCTAGACAATATCAAGAACTGATGGTTCTCATGACTCAAGACAGA
GCATTTTGGGTATGTTACTTATTAGGATTTCTTAAAAAATTGTTTTGTGTGTGTAT
GTGTGTGTTTTAAAGTGAACCACTGCCCAATATGAAAGTTTAATCTTCTCCTGAG
ACCAAGGCTTTTGAATCACTAACTCTTGGATCAATTCAGTGAAACTTGTGCTG
TCAGTGACTGAACCCTGCCAACAATGGTTTCAGTGTTCAAAGCTCAAAGAAAAC
15 GGCT

SEQ ID NO: 719

Human hyaluronate receptor (CD44) gene, exon 1

gi|180127|gb|M69215.1|HUMSCG01[180127]

- 20 TGGTTTGTGGTTTTTATGAAGAGATGTGAAAAAGGAAGTGTGGAATGATGGGAT
GAGAAGTTGTATGGGGAAGATGAATAGAAGAATTAGGTGGTTGAATAAAATTAA
AAAGGTGTGTGGTTGGATGAATGAATGAGTGGGATGATAGATGGACCTAAGTGGT
TAGTGGATGGACAGGAGGATGGATGGATGTGAGAGCCCCAGAAGGACATAAGG
AAAGATGGGTGGATAGATGGATGGGCGGATGGAAGGATATTTAGGAGGATGAAT
25 GAGCATGTGTGTGGAGAGAGGTGCCCATTCACACTGGCTTGAACACATGGGTTA
GCTGAGCCAAATGCCAGCCCTATGACAGGCCATCAGTAGCTTTCCTGAGCTGTT
CTGCCAAGAAGCTAAAATTCATTCAAGCCATGTGGACTTGTATTGAGGGGAAA
AAGAATGAGCTCTCCCTCTTCCACTTGGAAGATTCACCAACTCCCCACCCCTCA
CTCCCCACTGTGGGCACGGAGGCACTGCGCCACCCAGGGCAAGACCTCGCCCTCT
30 CTCCAGCTCCTCTCCCAGGATATCCAACATCCCTGTGAAACCAGAGATCTTGCTC
CAGCCGGATTACAGAGAAATTTAGCGGGAAAGGAGAGGCCAAAGGCTGAACCCA
ATGGTGCAAGGTTTTACGGTTCGGTCATCCTCTGTCTGACGCCGCGGGGCCAGC
GGGAGAAGAAAGCCAGTGCGTCTCTGGGCGCAGGGGCCAGTGGGGCTCGGAGG
CACAGGCACCCCGCGACACTCCAGGTTCCCCGACCCACGTCCCTGGCAGCCCCGA
35 TTATTTACAGCCTCAGCAGAGCACGGGGCGGGGGCAGAGGGGGCCCGCCCGGGAG
GGCTGCTACTTCTTAAACCTCTGCGGGCTGCTTAGTCACAGCCCCCCTTGCTTGG
GTGTGTCCTTCGCTCGCTCCCTCCCTCCGTCTTAGGTCACTGTTTTCAACCTCGAA
TAAAAACTGCAGCCAACTTCCGAGGCAGCCTCATTGCCAGCGGACCCAGCCTC
TGCCAGGTTTCGGTCCGCCATCCTCGTCCCGTCCCTCCGCGGGCCCTGCCCGCGC
40 CCAGGGATCCTCCAGCTCCTTTCGCCCCGCGCCCTCCGTTTCGCTCCGGACACCATG
GACAAGTTTTGGTGGCACGCAGCCTGGGGACTCTGCCTCGTGCCGCTGAGCCTGG
CGCAGATCGGTGAGTGCCCGCCGCAGGCTGGGCAGCAAGATGGGTGCGGGGTGC
TCAGCGCGGAC

45 SEQ ID NO: 720

yi63g06.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:143962 5', mRNA

sequence gi|851402|gb|R76770.1|R76770[851402]

AATTCGGAACGAGGNCTGTACAACACAGTGTATACAGGGATAATGCTATCATA
TTAATATGAAACAGTGTTACGGGCACAAATTACCCATTTCTACAAAATAAGTGT

GCAAGTGATGCCACATATTATCCATATTCAACTGAGCTGTCATCAAAATACATTT
 TATTTACAATATGTACTATGATCAGTTGGATATTAAGTTCTAAAATGATTTACTTC
 ACTGCTACATTATAAAGGTAAAAGCAATGTGTAGGAAAAAGTGTGAGATTGTGT
 TTTTACATACTGCTTTTGTAGTTGCCATCGCTGGTTCAGTTCGACTTATAACATAT
 5 GTCTTGCTTGTAGGATTTAACACCTCCAATAGGGGATTCTTCTAACATTACAGGA
 GGATTCTTAGGGGATCCGGGGCTTTTTCANCAGTATAT

SEQ ID NO: 721

yi07h02.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:138579 5', mRNA
 10 sequence gi|835174|gb|R63295.1|R63295[835174]

AATTCGGAACGAGGGAGAAATCAGTCTGGTTTCCATCCCAGTCGGGGAAGAGAG
 AGGTGAGAGGGAATCAGAACGTACCTAGTTGATTCCCTTGGTGACAAGTGCAATG
 GGGTATGGGTAGAATTTATTTTCAGAGCCAAGAGGACTTGATGGTTATAAATAAA
 GTTGCCTTTAGCAATGGAATTTACAGATCGATCATGTTGTTCCNAAAGATGTGAA
 15 TAGGATCCACAATAACAAGTTGATTCAGACTAATGTAGATATTTAGATTAGCAAG
 TATTGAACATTTGATTTCTTAGGACTGAGCTTTTAAATGAATTTCCATTATTTCTT
 CC

SEQ ID NO: 722

20 Homo sapiens P2U nucleotide receptor mRNA, complete cds

gi|984506|gb|U07225.1|HSU07225[984506]

CGGCACGAGGCACCCCGAGAGGAGAAGCGCAGCGCAGTGGCGAGAGGAGCCCC
 TTGTGGCAGCAGCACTACCTGCCCAGAAAAATGCTGGAGGCTGGGCGTGGCCCC
 AGGCCTGGGGACCTGTTTCTCTGTTTCCCGCAGAGTTCCCTGCAGCCCGGTCCA
 25 GGTCCAGGCGTGTGCATTCATGAGTGAGGAACCCGTGCAGGCGCTGAGCATCCT
 GACCTGGAGAGCAGGGGCTGGTCAGGGCGATGGCAGCAGACCTGGGCCCCTGGA
 ATGACACCATCAATGGCACCTGGGATGGGGATGAGCTGGGCTACAGGTGCCGCT
 TCAACGAGGACTTCAAGTACGTGCTGCTGCCTGTGTCTACGGCGTGGTGTGCGT
 GCTTGGGCTGTGTCTGAACGCCGTGGCGCTCTACATCTTCTTGTGCCGCTCAAG
 30 ACCTGGAATGCGTCCACCACATATATGTTCCACCTGGCTGTGTCTGATGCACTGT
 ATGCGGCCTCCCTGCCGCTGCTGGTCTATTACTACGCCCGCGGCGACCACTGGCC
 CTTACGACCGGTGCTCTGCAAGCTGGTGCGCTTCTCTTCTACACCAACCTTTACT
 GCAGCATCCTCTTCTCACCTGCATCAGCGTGACCGGTGTCTGGGCGTCTTACG
 ACCTCTGCGCTCCCTGCGCTGGGGCCGGGCCCGCTACGCTCGCCGGGTGGCCGGG
 35 GCCGTGTGGGTGTTGGTGTCTGGCCTGCCAGGCCCGCGTGTCTACTTTGTACCA
 CCAGCGCGCGCGGGGGCCGCGTAACCTGCCACGACACCTCGGCACCCGAGCTCT
 TCAGCCGCTTCGTGGCCTACAGCTCAGTCATGCTGGGCCTGCTCTTCGCGGTGCC
 CTTTGCCGTCATCCTTGTCTGTTACGTGCTCATGGCTCGGCGACTGCTAAAGCCAG
 CCTACGGGACCTCGGGCGGCCTCCCTAGGGCCAAGCGCAAGTCCGTGCGCACCA
 40 TCGCCGTGGTGTCTGGCTGTCTTCGCCCTCTGCTTCTTCCGCTGACCCGCGC
 ACCCTCTACTACTCCTTCCGCTCGCTGGACCTCAGCTGCCACACCTCAACGCCAT
 CAACATGGCCTACAAGGTTACCCGGCCGCTGGCCAGTGCTAACAGTTGCCTTGAC
 CCCGTGCTCTACTTCTTGGCTGGGCAGAGGCTCGTACGCTTTGCCCGAGATGCCA
 AGCCACCCACTGGCCCCAGCCCTGCCACCCCGGCTCGCCGCAGGCTGGGCCTGCG
 45 CAGATCCGACAGAAGTACATGCAGAGGATAGGAGATGTGTTGGGCAGCAGTGA
 GGACTTCAGGCGGACAGAGTCCACGCCGGCTGGTAGCGAGAACACTAAGGACAT
 TCGGCTGTAGGAGCAGAACTTCAGCCTGTGCAGGTTTATATTGGGAAGCTGTA
 GAGGACCAGGACTTGTGCAGACGCCACAGTCTCCCCAGATATGGACCATCAGTG
 ACTCATGCTGGATGACCCCATGCTCCGTCATTTGACAGGGGCTCAGGATATTCAC

TCTGTGGTCCAGAGTCAACTGTTCCCATAACCCCTAGTCATCGTTTGTGTGTATAA
 GTTGGGGGAATTAAGTTTCAAGAAAGGCAAGAGCTCAAGGTCAATGACACCCCT
 GGCCTGACTCCCATGCAAGTAGCTGGCTGTACTGCCAAGGTACCTAGGTTGGAGT
 CCAGCCTAATCAAGTCAAATGGAGAAACAGGCCCAGAGAGGAAGGTGGCTTACC
 5 AAGATCACATACCAGAGTCTGGAGCTGAGCTACCTGGGGTGGGGGCCAAGTCAC
 AGGTTGGCCAGAAAACCCCTGGTAAGTAATGAGGGCTGAGTTTGCACAGTGGTCT
 GGAATGGACTGGGTGCCACGGTGGACTTAGCTCTGAGGAGTACCCCCAGCCCAA
 GAGATGAACATCTGGGGACTAATATCATAGACCCATCTGGAGGCTCCCATGGGC
 TAGGAGCAGTGTGAGGCTGTAACCTATACTAAAGGTTGTGTTGCCTGCTAAAAAA
 10 AA

SEQ ID NO: 723

aa50e04.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:824382 3', mRNA
 sequence

15 gi|2219301|gb|AA489699.1|AA489699[2219301]
 TTTTTTTTTTGAATAATTGAAGAATTCAGTTAAATATTTATTGAACAAATGCAG
 AGTA
 AATGAACTAAGGGCTGTTATAACCTTAAGTTACAACAAACAACTTCAAATATTCA
 GAGGGCTGTCACACAGAGAATGAAAGACTTGCTCAGTATTTCTCCAAAGGGCAG
 20 AACTTGAGCCAAGGGATAAATATAAGCAACCAATGGGCTGCAGGATAGTTGTAC
 AAAGTGTATCATGTATCTTCATAGCTTCTTTGCCCATATAATGCATTCCCACTTA
 AGTTTCTCCTTCTAAAAGGGGACACGACAAGTTAATATGTCTCATAAATGTCTTA
 AATAAGTTGCATTTTCATGGCAAGCCCTCCACTGCCAGCAATGGATATACTCACA
 CTATTGGAAAAAATCTAAAGTTAACAACCTGGTTTAGTATGGAAATGGTCTATTT
 25 GTTCCTCAGCTATGTTTCTGTATCCTACATTAGTGGCTCTCAGGAGG

SEQ ID NO: 724

HUMHBC4799 Human pancreatic islet Homo sapiens cDNA similar to alpha-1
 antichymotrypsin, mRNA sequence gi|1262485|dbj|D83812.1|D83812[1262485]

30 CGCAGACAATGATGGTCCTGGTGAATTACATCTTCTTTAAAGCCAAATGGGAGAT
 GCCCTTTGACCCCCAANATACTCATCAGTCAAGGTTCTACTTGAGCAAGAAAAAG
 TGGGTAATGGTGCCCATGATGAGTTTGCATCACCTGACTATACCTTACTTCCGGG
 ACGAGGAGCTGTCCTGCACCGTGGTGGAGCTGAAGTACACAGGCAATGCCAGCG
 CACTCTTCATCCTCCCTGATCAAGACAAGATGGAGGAAGTGGAAGCCATGCTGCT
 35 CCCANAGACCCTGAAGCGGTGGAGAGACTCTCTGGAGTTCANAGAGATAGGTGA
 GCTCTACCTGCCAAAGTTTTCCANCTCGAGGGACTATAACCTGAACGACATNCTT
 CTCCAGCTGGGCATTGAGGAAGCCTTC

SEQ ID NO: 725

40 zx84c12.s1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:810454 3',
 mRNA sequence gi|2179839|gb|AA457119.1|AA457119[2179839]
 CTCATCAAAACATGATTTATTAATTTAAGCAAGAGTAAGCATATGTGATAGTGG
 CCAGCTTGGGGATAGAACTCTTCCTGGTTGATGCACAGTTCAGCACCTGTTGGGT
 CTTGGCTGTTGGGATGATAATTCTTTTGGGTGAGGGGAACAGCCGTGGTCAAGGC
 45 TGCCTGCACCCCCATCCAGGCACAGGACCCTGGGCAAAGTCTCAAAAGAGGTAG
 TGTTTTTACTTTTCGCACCAACAATACAACATAAGTATTGGGTACAAAAGAGGAGA
 TTTCTTCCCCTCTACCTCAACGGGCAAAGGCCTTCATCTTCAGAAGAGGCTT
 GTGAGGACCATCGGTTGGATGACCTCCTAGTGAGTTCTGGCTCCCATTCAGAGCA

SEO ID NO: 726

15

yr38g10.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:207618 3' similar to gb:L24038_ma1 A-RAF PROTO-ONCOGENE SERINE/THREONINE-PROTEIN KINASE (HUMAN);, mRNA sequence

30

Human thyroid hormone receptor alpha 1 (TR-alpha-1) gene, complete cds
gi|339662|gb|M24748.1|HUMTHRA1A|339662]

605

CTACGACCCTGAGAGCGACACCCTGACGCTGAGTGGGGAGATGGCTGTCAAGCG
 GGAGCAGCTCAAGAATGGCGGCCTGGGCGTAGTCTCCGACGCCATCTTTGAACT
 GGGCAAGTCACTCTCTGCCTTTAACCTGGATGACACGGAAGTGGCTCTGCTGCAG
 GCTGTGCTGCTAATGTCAACAGACCGCTCGGGCCTGCTGTGTGTGGACAAGATCG
 5 AGAAGAGTCAGGAGGCGTACCTGCTGGCGTTCGAGCACTACGTCAACCACCGCA
 AACACAACATTCCGCACTTCTGGCCCAAGCTGCTGATGAAGGTGACTGACCTCCG
 CATGATCGGGGCCTGCCACGCCAGCCGCTTCCTCCACATGAAAGTCGAGTGCCCC
 ACCGAACTCTTCCCCCCTCTTCTCCTCGAGGTCTTTGAGGATCAGGAAGTCTAAA
 GCCTCAGGCGGCCAGAGGGTGTGCGGAGCTGGTGGGGAGGAGCCTGGAGAGAA
 10 GGGGCAGAGCTGGGGGCTGAGGGAGACCCCCCACACCCCTTCTCTCCTTCTCT
 CGTCCTTGATAGATTCAGCTCCACACACACACCCCGCACTGCCCAGGTCCCTC
 CTCAGACCTCCAGCCCTGGGACAGGGCAAACAACCTGAACTTGCTATGGAAAGGA
 CAGTGTGGGAGGCTGGGGGAGCTGTGTCCTGCAGTTCCAGGACCCCATCCTCTC
 AGAAGGTAGGGGAAGGGCGGGAGGATTGAGAAGGGACAAGCCACCTTGACCGT
 15 AGGGGAAGGAGGAATGTGGGCTGGGGGAAGATGCCCTCAACTCACCCCTCACA
 CACATGAGAGAGAGCCCCCAGGTTCTTGGCCTAGGTCTCCCCTCCAGGCTG
 AGGGCCTCTCTACTTCCCCAGATGCCTGGGTGCAAAGAACGGCTTGCTTGCTC
 CTCCTCTGGAGGTTAAAATTTATAGTCATTCTAACTGCACTTGGAACCAAGCAA
 GGGGAGAAGACAAATGAAGAAAACT

SEQ ID NO: 729

gi|404051.1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:898281.3' similar to
 gb:X53416.1 ENDOTHELIAL ACTIN-BINDING PROTEIN (HUMAN);, mRNA sequence:
 gi|2432277|gb|AA598978.1|AA598978[2432277]

25 TTTTTTTTAAATGGAAGCAAACTTTATTCCTCTTGGCTGGAGAAGAGAACTAGT
 GGGTGGTTGTGTACAGGACCCCATCCCTCACCCCTCCAGAACCAAAGAAGAC
 AAGCAGCGCCACCAAATGGCTCCCTCTGCCCAAGTGAAAGCCGAGAGGTCAGCG
 GCTGGCTGGGGAGGCAGGTGAGCGCACACGGCACAGGGCAGGGGCGGCTGCAG
 TGACAGGCGGGCGGCCAGGGCGGCCTGGGCCGGGGTTGAGGGGAAGAGGGCGG
 30 GGCTGCTTGGGTAGCGGGGCAGGCTTGGGGGCTGCCGGCTGGCACGGGCCCCAG
 ACTCAGGGCACCAACGCGGTAGGGGCTGCCTGGGATGTGCTCGTCCCCCATT
 TGACCACAGTGTGTAATCCCCCTTGTCTTGAGCAGGTAGGACACGCTGTAGAG
 CCGGATTGCCAAGTTCTTTACCAGGAGTTTCCCGCAGGGGGCCTTTGGCCATTAA
 CCCACC

SEQ ID NO: 730

yr86d03.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:212165 3'
 similar to gb:Z22548 THIOI-SPECIFIC ANTIOXIDANT PROTEIN (HUMAN);, mRNA
 sequence gi|1030355|gb|H68845.1|H68845[1030355]

40 TTCCCTAATACTTTATTGGNTACCTCTAGGCCTGTGTGCGGCTGGGTGGGCTTGG
 GGGAGGGCGTCACTATTCAGCTTCTAGGTGGAGGCATGAGAAGGCCTTGGCTAG
 NCCCTCCAGGGTCCCATACTGTGGAGTTTGGAGGGGCAGGTCTGGCCTTTCTTG
 GTCAGCATAGGGCACCCAGGTNGGGGCACAGGTGGACACCCAGCACAGGCACCT
 AGGCAGGGGCACAAGCTCACTATCCGTTAGCCAGCCTAATTGTGTTTGGAGAAAT
 45 ATTCCTTGCTGTCATCCACGTTGGGCTTAATCGTGTCACTACCAGGCTTCCAGCCA
 GCGGGANAACTTTCCCCATGCTCGTCTGTGTACTGGGAAGGNCTGGGACCAGC
 CGCAGAGCCTANATTCCACGGAGCGTCCCACAGGCAAAT

SEQ ID NO: 731

ab23b05.r1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:841617 5' similar to TR:E183625 E183625 ORNITHINE DECARBOXYLASE ANTIZYME ;, mRNA sequence

5 gi|2217845|gb|AA487681.1|AA487681[2217845]
 GTGCTGAGTGGCGGCACTCTACATCGAGATCCCGGGCGGCGGCTGCCCCGAGGGG
 AGCAAGGACAGCTTTGCAAGTTCTCCTGGAGTTCGCTGAGGAGCAGCTGCGAGCC
 GACCATGTCTTCATTTGCTTCCACAAGAACCGCGATGACAGAGCCGCTTGCTCC
 GAACCTTCAGCTTTTTTGGGCTTTGAGATTGTGAGACCGGGGCATCCCCTTGCTCC
 10 CAAGAGACCCGACGCTTGCTTCATGGCCTACACGTTTCGAGAGAGAGTCTTCGGG
 A

SEQ ID NO: 732

Human elastase III B mRNA, complete cds, clone pCL1E3

15 gi|607029|gb|M18692.1|HUMELA3A[607029]
 CCTATCATCGCAAACTCATGATGCTCCGGCTGCTCAGTTCCCTCCTCCTTGTGGC
 CGTTGCCTCAGGCTATGGCCACCTTCTCTCGCCCTTCCAGCCGCGTTGTCAATG
 GTGAGGATGCGGTCCCCTACAGCTGGCCCTGGCAGGTTTCCCTGCAGTATGAGAA
 AAGCGGAAGCTTCTACCACACCTGTGGCGGTAGCCTCATCGCCCCGACTGGGTT
 20 GTGACTGCCGGCCACTGCATCTCGAGCTCCCGGACCTACCAGGTGGTGTGTTGGGCG
 AGTACGACCGTGCTGTGAAGGAGGGCCCCGAGCAGGTGATCCCCATCAACTCTG
 GGGACCTCTTTGTGCATCCACTCTGGGAACCGCTCGTGTGTGGCCCTGTGGCAATGA
 CATCGCCCTCATCAAGCTCTCAGGCAGCGCCAGCTGGGAGACGCGCTCCAGCTC
 GCCTCACTCCCTCCGGCTGGTGTGACATCCTTCCCAACGAGACACCCTGCTACATCA
 25 CCGGCTGGGGCCGTCTCTATACCAACGGGCCACTCCCAGACAAGCTGCAGGAGG
 CCCTGCTGCCGGTGGTGGACTATGAACACTGCTCCAGGTGGAAGTGGTGGGGTTC
 CTCCGTGAAGAAGACCATGGTGTGTGCTGGAGGGGACATCCGCTCCGGCTGCAA
 TGGTGAAGTCTGGAGGACCCCTCAACTGCCCCACAGAGGATGGTGGCTGGCAGGT
 CCATGGCGTGACCAGCTTTGTTTCTGCCTTTGGCTGCAACACCCCGCAGGAAGCCC
 30 ACGGTGTTCACTCGAGTCTCCGCCTTCATTGACTGGATTGAGGAGACCATAGCAA
 GCCACTAGAACCAAGGCCAGCTGGCAGTGCTGATCGATCCCACATCCTGAATA
 AAGAADAAGATCTCTCAG

SEQ ID NO: 733

35 yq07g06.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:196282 3',
 mRNA sequence gi|960149|gb|R92609.1|R92609[960149]
 TGCTGTTAGTTTAATGTGGACAGAGACATCCCACGGCGTGACTGTTAGTTAGGAT
 GAGTCAGCTTGGGGGAGTTTGTGCTTCCTGCTTGGNGTGGCCAGCCACATGCCAA
 GGTCCCCTGCCTTCTAGCCCAGAATGACGGGACTGGGCAGAACACCCCCAACTTT
 40 TAGCTGCCACTTGGCTCATTACAGCAGTACCAGTATGGGGGTGGGAGGGGTGAG
 GCTNTGGAGTGAAGGCGGCGTATAGGGCAGAGACTAAGAGGGTCTGTGAGATT
 CTTAGAGGAGCCATCCTGNTCCAAGGGGCCTGAGCTGAGTNTGGGTCTGTGAGC
 ATCTGCTGCTCCTCTCAGAGAGGGGAGATCTCACTCTCTGCCAGTCTGTCTAGCC
 CCAAAG

45

SEQ ID NO: 734

yv19b06.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:243155 3',
 mRNA sequence gi|1102102|gb|H94469.1|H94469[1102102]
 GCAAAACAACATTTATTCTTTTAAAAAATCTATATACATTGCCATACAAAGATAC

CACATTGAAGCAGTTCTCAGGAACCTTCCAGTGAGCCTTCTCTTATAATTGCCCG
 AGCAAGATTTTCGTGCCAGAGAAAGTCTCAGCATTTCACCTTGGTGTNCTCTATG
 TCATCATCCTGGAGCTGCTCGGTATCAGATTCTCCATGCACAGGTCTTCTTGACGT
 CAAGTCCTCCAGACACCGCATCAACTCATAAGTCTGTTCTGCTGAGAAAATCACC
 5 TGTTCCTGTTCCAAAAGGGGCAAGGCATCTGTGAGCAGAGTTCATCCCAGAAAGA
 CCGAAGGGGCAATCCGAGACGTCATCAAGGACAGAAGGA

SEQ ID NO: 735

aa91g07.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:838716 3'
 10 similar to TR:G173234 G173234 RIBOSOMAL 5S RNA-BINDING PROTEIN ;, mRNA
 sequence

gi|2180364|gb|AA457644.1|AA457644[2180364]

TAGTATGAACTTAGTGTTTTAGTAGATCTTGTGATTTCTGAAAACGAATTTCTTC
 TAAACATCAAGCTATTTTTCTTCACTATCTATACCTGCTATGCAGAGATTGAGAA
 15 CCAAACCAAATGGATATCTGCTTTTAAGATTAGAATTTGTTCTTCATCCTTAAAGC
 AGAACTCATTGAGATGAAAAGATGCTCTTAATTTATCACAGAACTGTGTATTTAA
 TAGTATGCTTATTAAAATCACGAAGTGTACTGGAATGCTAAGATAAAAGAACTGT
 ATAGTTTCTGTTATGTAATACGAGAATAGAAATGTTATTTAAATCTTTCTATAATT
 TCCAGTGCTTCTGTTTTGAAGAACAAAGGCTTAATCCCCAAGAGGAAGTAGATAT
 20 GCCAGTGTTTTTCTACATTGATCCTGAATTTGCTGAAGATCCA

SEQ ID NO: 736
 Hsapiens CD18 exon 14 gi|29753|emb|X63924.1|HSCD18X14[29753]

CTCCCCGCAGCTCCTGCGCCGAGTGCCTGAAGTTCGAAAAGGGCCCCCTTTGGGAA
 25 GAACTGCAGCGCGGCGTGTCCGGGCTGCAGCTGTGCAACAACCCCGTGAAGGG
 CAGGACCTGCAAGGAGAGGGACTCAGAGGGCTGCTGGGTGGCCTACACGCTGGA
 GCAGCAGGACGGGATGGACCGCTACCTCATCTATGTGGATGAGAGCCGAGGTGA
 GGCCGC

SEQ ID NO: 737

ye81h02.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:124179 3',
 mRNA sequence gi|751008|gb|R01272.1|R01272[751008]

TCTTTATTTAAAATAAAAGTTTAAAAATAATGTGGGTAGTGTAATAATTAATACA
 GAAATGTATAAAGTTGAAAGTTTCATGTGATCTACACTGTTCAAAGAAAGCTGTG
 35 AATAGACCTTTCTATGCATTTATAAACATAAGCACACACATTTTAAAATGAGTTC
 AACTGTACACTTTTCTATTAATAACTTGTTCACCTAATGTATCATGGCCATTTT
 TCCATACACAATGAATGTACTTTATTCATTTTAACAGATACGAGGATATTCCTAT
 ATGGGCTGGAACACACCTTTAACCCCTATCCCTTTAATGACAGGACATTTAGGGN
 TTTCTATTACTTTCTACCCATGGTCCATTTTACGGCTTCTGTGGGGGATCCTTAA
 40 ATATCCCCCTCAGGTTCCCGGTTTCCATTTTGT

SEQ ID NO: 738

zx35f11.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:788493 3',
 mRNA sequence gi|2166225|gb|AA452556.1|AA452556[2166225]

TTTTGAAAGTAAAAATTTTATTTTGATTGATTTCTCAATGTATAGTTCAGTATAA
 45 TGCCAGTTTTTAATGGCAAAAATTTGGTTCCACTGAACTCCATAATGCTACAGA
 GAGCTACTACTTTTTCCAGGAAGTAGGTTAACAGCTAGAAAGAAAAAGGACAAT
 TTCCTAGCAGCATGGCAACTTAACTGCAGATCTAATAGGTCTGCAACTTTTACA
 CTAATAATGGCACAAACAGCTGGTGACACAAGTGAGAAATGGGGAACAAGATG

SEQ ID NO: 739

5 zc35g04.s1 Soares_senescent_fibroblasts_NbHSF Homo sapiens cDNA clone
 IMAGE:324342 3', mRNA_sequence gi|1332227|gb|W47576.1|W47576[1332227]
 CTTGGAAATTTTTTTATTCTCCTTGCCAACATTTCTTTTGACATTTTATTACTTAAT
 TATGTGACATTAAGAAATAATTTGGTTGCATATTATTTCAAAAAGCAGTAAGAA
 AGTAGCTATTGAGAAAGAAGGAGGGCCATAGGTTTTCAATAAAACGTTAGAAA
 10 CATTATAAAAAACGAGACTCCCATACATGGAAACACATGATCAAAGATCAGAC
 TAACACACATTCAAACAGGCTTGGTTCGAAATAGAGTTCTCCATTTCTTTCAGAT
 GAGCCTTTTTTCTTAGGCTCTTTCAGAAGCACTTCACAATGAACAGAGGTCTTGC
 CAGCTCATTTTCATTAGCGGAGAAGCAAAGGTATGATGGCAGAATCATGAGAAGA
 TGGAAATAAGGCCT

15

ye40b03.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:120173 5', mRNA sequence gi|734317|gb|T95693.1|T95693[734317]

20 AGATGTTCCAGGAGTAGAATTCCTGACTGCTGTGTGAAAGTGAAGTCTACTCCA
TCTCTGAAACATATCTGAGAAACGGGGCAGAAAACCAAGTGTAAGTCTCGTGG
TGAAATTATTGAACATTGAAGTGTGAGGCTTGTCTTAAGAGCACGTCACCTCCCT
TGACACAGATTCTGCATGTCCTTCCCTCTGGTAGGGATCCTCCAGTTCCGTTTCTC
AGGCGAAGTAACCAGAGGTTCCAGTCTGGTNTTGCTTTCTGGGGAGGGGAAGGAC
AGAGGCACCTAGGTTAATAGGATECCCAAGGGTACTTGATTGGGGCAACCCACAC
25 ATGGANTTCAGGAGGGGGGACCTTAAGGECNTTCAGGCAGG

gi|189313|gb|L01639.1|HUMNYRECA[189313]

30 CGCATCTGGAGAACCAGCGGTTACCATGGAGGGGATCAGTATATACACTTCAGA
TAACTACACCGAGGAAATGGGCTCAGGGGACTATGACTCCATGAAGGAACCTG
TTTCCGTGAAGAAAATGCTAATTTCAATAAAATCTTCCTGCCACCATCTACTCC
ATCATCTTCTTAACTGGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGT
ACCAGAAGAACTGAGAAGCATGACGGACAAGTACAGGCTGCACCTGTCAGTGG
35 CCGACCTCCTCTTTGTCATCACGCTTCCTTCTGGGCAGTTGATGCCGTGGCAAAC
TGGTACTTTGGGAACCTTCCTATGCAAGGCAGTCCATGTCATCTACACAGTCAACC
TCTACAGCAGTGTCTCATCCTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATC
GTCCACGCCACCAACAGTCAGAGGCCAAGGAAGCTGTTGGCTGAAAAGGTGGTC
TATGTTGGCGTCTGGATCCCTGCCCTCCTGCTGACTATTCCCGACTTCATCTTTGC
40 CAACGTCAGTGAGGCAGATGACAGATATATCTGTGACCGCTTCTACCCCAATGAC
TTGTGGGTGGTTGTGTTCCAGTTTCAGCACATCATGGTTGGCCTTATCCTGCCTGG
TATTGTCATCCTGTCCTGCTATTGCATTATCATCTCCAAGCTGTCACACTCCAAGG
GCCACCAGAAGCGCAAGGCCCTCAAGACCACAGTCATCCTCATCCTGGCTTTCTT
CGCCTGTTGGCTGCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGG
45 AAATCATCAAGCAAGGGTGTGAGTTTGAGAACACTGTGCACAAGTGGATTTC
TCACCGAGGCCCTAGCTTTCTTCCACTGTTGTCTGAACCCCATCCTCTATGCTTTC
CTTGGAGCCAAATTTAAAACCTCTGCCCAGCACGCACTCACCTCTGTGAGCAGAG
GGTCCAGCCTCAAGATCCTCTCAAAGGAAAGCGAGGTGGACATTATCTGTTTC
CACTGAGTCTGAGTCTTCAAGTTTTCACTCCAGCTAACACAGATGTAAAAGACTT

TTTTTTTATACGATAAATAACTTTTTTTTAAAGTTACACATTTTTCAGATATAAAAG
ACTGACCAATATTGTACAGTTTTTATTGCTTGTGGATTTTTGTCTTGTGTTTCTTT
AGTTTTTGTG

5 SEQ ID NO: 742

>AA504554

CACCCACGGTGACCGTTTTTCATCAGCAGCTCCCTCAACACCTTCCGCTCCGAGAA
GCGATACAGCCGCAGCCTCACCATCGCTGAGTTCAAGTGTAAGTGGAGTTGCTG
GTGGGCAGCCCTGCTTCCTGCATGGAAGTGGGAGCTGTATGGAGTTGACGACAA
10 GTTCTACAGCAAGCTG
GATCAAGAGGATGCGCTCCTGGGCTCCTACCCTGTAGATGACGGCTG

SEQ ID NO: 743

>M11723

15 TTGGAGTCAACACTTTCGATTCCACCTTGGGAAGCCCCCAAGGAGCATAAGTACA
AAGCTGAAGAGCACACAGTCGTTCTCACTGTCACCGGGGAGCCCTGCCACTTCCC
CTTCCAGTACCACCGGCAGCTGTACCACAAATGTACCCACAAGGGCCGGCCAGG
CCCTCAGCCCTGGTGTGCTACCACCCCCAAGTTTGTATCAGGACCAGCGATGGGGA
TACTGTTTGGAGCCCAAGAAAGTGAAAGACCACTGCAGCAAACACAGCCCCTGC
20 CAGAAAGGAGGGACCTGTGTGAACATGCCAAGCGGCCCCCACTGTCTCTGTCCA
CAACACCTCACTGGAAACCACTGCCAGAAAGAGAAGTGCTTTGAGCCTCAGCTT
CTCCGGTTTTTCCACAAGAATGAGATATGGTATAGAAGTGAAGCAGCTGTGG
ACAGATGCCAGTGCAAGGGTCTGATGCCCACTGCCAGCGGCTGGCCAGCCAGG
CCTGCCGCACCAACCGGTGCCTCCATGGGGGTGCTGCTAGAGGTGGAGGGCC
25 ACCGCCTGTGCCACTGCCCAGTGGGCTACACCGGACCCTTCTGCGACGTGGACAC
CAAGGCAAGCTGCTATGATGGCCGCGGGCTCAGCTACCGCGGCCTGGCCAGGAC
CACGCTCTCGGGTGCGCCCTGTGAGCCGTGGGCCTCGGAGGCCACCTACCGGAAC
GTGACTGCCGAGCAAGCGCGGAAGTGGGGACTGGGCGGCCACGCCTTCTGCCGG
AACCCGGACAACGACATCCGCCCCGTGGTGTCTCGTGCTGAACCGCGACCGGCTG
30 AGCTGGGAGTACTGCGACCTGGCACAGTGCCAGACCCCAACCCAGGCGGCGCCT
CCGACCCCGGTGTCCCCTAGGCTTCATGTCCCACTCATGCCCGCGCAGCCGGCAC
CGCCGAAGCCTCAGCCCACGACCCGGACCCCGTCTCAGTCCCAGACCCCGGGAG
CCTTGCCGGCGAAGCGGGAGCAGCCGCCTTCCCTGACCAGGAACGGCCCACTGA
GCTGCGGGCAGCGGCTCCGCAAGAGTCTGTCTTCGATGACCCGCGTCTGTTGGCGG
35 GCTGGTGGCGCTACGCGGGGCGCACCCCTACATCGCCGCGCTGTACTGGGGCCA
CAGTTTCTGCGCCGGCAGCCTCATCGCCCCCTGCTGGGTGCTGACGGCCGCTCAC
TGCTGACAGGACCGGCCCGCACCCGAGGATCTGACGGTGGTGCTCGGCCAGGAA
CGCCGTAACCACAGCTGTGAGCCGTGCCAGACGTTGGCCGTGCGCTCCTACCGCT
TGCACGAGGCCTTCTCGCCCGTCACTACCAGCACGACCTGGCTCTGTTGCGCCT
40 TCAGGAGGATGCGGACGGCAGCTGCGCGCTCCTGTCGCCTTACGTTACGCCGGTG
TGCTGCCAAGCGGCGCCGCGCGACCCCTCCGAGACCACGCTCTGCCAGGTGGCC
GGCTGGGGGCCACCAAGTTCGAGGGGGCGGAGGAATATGCCAGCTTCCTGCAGGAG
GCGCAGGTACCGTTCCCTCTCCCTGGAGCGCTGCTCAGCCCCGGACGTGCACGGAT
CCTCCATCCTCCCCGGCATGCTCTGCGCAGGGTTCCCTCGAGGGCGGCACCGATGC
45 GTGCCAGGGTGATTCCGGAGGGCCCGCTGGTGTGTGAGGACCAAGCTGCAGAGCG
CCGGCTCACCCCTGCAAGGCATCATCAGCTGGGGATCGGGCTGTGGTGACCGCAA
CAAGCCAGGCGTCTACACCGATGTGGCCTACTACCTGGCCTGGATCCGGGAGCA
CACCGTTTCTGATTGCTCAGGGACTCATCTTCCCTCCTTGGTGATTCCGCAGTG

AGAGAGTGGCTGGGGCATGGAAGGCAAGATTGTGTCCCATTCCCCCAGTGCGGC
CAGCTCCGCGCCAGGATGGCGCAGGA ACTCAATAAAGTGCTTTGAAAATGCTG

SEQ ID NO: 744

5 >S60489

CTACTCCTAGATATTTGGCATGATCTTCAGTATGATCTTGTGCTGTGCTATCCGCA
GGAACCGCGAGATGGTCTAGA

SEQ ID NO: 745

10 >M59916

GAATTCGGGCGGGGGCGCCGCCCGGGGCCCTGAGGGCTGGCTAGGGTCCAGGCC
GGGGGGGACGGGACAGACGAACCAGCCCCGTGTAGGAAGCGCGACAATGCCCC
GCTACGGAGCGTCACTCCGCCAGAGCTGCCCCAGGTCCGGCCGGGAGCAGGGAC
AAGACGGGACCGCCGGAGCCCCCGGACTCCTTTGGATGGGCCTGGTGTGCGC
15 TGGCGCTGGCGCTGGCGCTGGCTCTGTCTGACTCTCGGGTTCTCTGGGCTCCGGC
AGAGGCTCACCTCTTTCTCCCCAAGGCCATCCTGCCAGGTTACATCGCATAGTG
CCCCGGCTCCGAGATGTCTTTGGGTGGGGGAACCTCACCTGCCCAATCTGCAAAG
GTCTATTCACCGCCATCAACCTCGGGCTGAAGAAGGAACCCAATGTGGCTCGCGT
GGGCTCCGTGGCCATCAAGCTGTGCAATCTGCTGAAGATAGCACCACTGCCGTG
20 TGCCAATCCATTGTCCACCTCTTTGAGGATGACATGGTGGAGGTGTGGAGACGCT
CAGTGCTGAGCCCATCTGAGGCCTGTGGCCTGCTCCTGGGCTCCACCTGTGGGCA
CTGGGACATTTCTCATCTTTGGAACATCTCTTTGCCCTACTGTGCCGAAGCCGCCCG
CCAAACCCCCCTAGCCCCCGAGCCCCAGGTGCCCTGTGAGCCGCATCCTCTTCCTAG
CACTGACCTGCACTGGGATCATGACTACCTGGAGGGGCACGGACCCTGACTGTGC
25 AGACCCACTGTGCTGCCGCCGGGGTTCTGGCCTGCCGCCCGCATCCCGGCCAGGT
GCCGGATACTGGGGCGAATACAGCAAGTGTGACCTGCCCTGAGGACCCTGGAG
AGCCTGTTGAGTGGGCTGGGCCCAGCCGGCCCTTTTGATATGGTGTACTGGACAG
GAGACATCCCCGCACATGATGTCTGGCACCAGACTCGTCAGGACCAACTGCGGG
CCCTGACCACCGTCACAGCACTTGTGAGGAAGTTCCTGGGGCCAGTGCCAGTGTA
30 CCCTGCTGTGGGTAACCATGAAAGCATACTGTCAATAGCTTCCCTCCCCCCTTC
ATTGAGGGCAACCACTCCTCCCGCTGGCTCTATGAAGCGATGGCCAAGGCTTGGG
AGCCCTGGCTGCCTGCCGAAGCCCTGCGCACCCCTCAGAATTGGGGGGTTCTATGC
TCTTTCCCATAACCCCGGTCTCCGCCTCATCTCTCTCAATATGAATTTTGTTCCTG
TGAGAACTTCTGGCTCTTGATCAACTCCACGGATCCCGCAGGACAGCTCCAGTGG
35 CTGGTGGGGGAGCTTCAGGCTGCTGAGGATCGAGGAGACAAAGTGCATATAATT
GGCCACATTCCCCCAGGGCACTGTCTGAAGAGCTGGAGCTGGAATTATTACCGA
ATTGTAGCCAGGTATGAGAACACCCTGGCTGCTCAGTTCTTTGGCCACACTCATG
TGGATGAATTTGAGGTCTTCTATGATGAAGAGACTCTGAGCCGGCCGCTGGCTGT
AGCCTTCCTGGCACCCAGTGCAACTACCTACATCGGCCTTAATCCTGGTTACCGT
40 GTGTACCAAATAGATGGAACTACTCCAGGAGCTCTCACGTGGTCCTGGACCATG
AGACCTACATCCTGAATCTGACCCAGGCAAACATAACGGGAGCCATAACGCACT
GGCAGCTTCTCTACAGGGCTCGAGAAACCTATGGGCTGCCCAACACACTGCCTAC
CGCTGGCACAACCTGGTATATCGCATGCGGGGCGACATGCAACTTTTCCAGACC
TTCTGGTTTCTCTACCATAAGGGGCCACCCACCCTCGGAGCCCTGTGGCACGCCCT
45 GCCGTCTGGCTACTCTTTGTGCCAGCTCTCTGCCCCTGCTGACAGCCCTGCTCTG
TGCCGCCACCTGATGCCAGATGGGAGCCTCCAGAGGCCAGAGCCTGTGGCCA
AGGCCACTGTTTTGCTAGGGCCCCAGGGCCCCACATTTGGGAAAGTTCTTGATGTA
GGAAAGGGTGAAAAAGCCCAAATGCTGCTGTGGTTCAACCAGGCAAGATCATCC
GGTGAAAGAACCAGTCCCTGGGCCCAAGGATGCCGGGGAAACAGGACCTTCTC

CTTTCCTGGAGCTGGTTTAGCTGGATATGGGAGGGGGTTTGGCTGCCTGTGCCCA
GGAGCTAGACTGCCTTGAGGCTGCTGTCCTTTCACAGCCATGGAGTAGAGGCCTA
AGTTGACACTGCCCTGGGCAGACAAGACAGGAGCTGTCGCCCCAGGCCTGTGCT
GCCCAGCCAGGAACCCCTGTACTGCTGCTGCGACCTGATGCTGCCAGTCTGTAAAA
5 ATAAAGCCCCGCCGAATTC

SEQ ID NO: 746

>W74362

TGAAGATGGAGCTAATCTTTCCTCTGCTCGTGGCATTGTTGTCGCTTATCCAGTCTT
10 CTAAGCTAGGGCATACCAGCAGATCTTGGATGTGCTGGATGAAAATCGCAGAC
CTGTGTTGCGTGGTGGGTCTGCTGCCGCCACTTCTAATCCTCATCATGACAACGT
NAGGTATGGCATTTCAAATATAGATACAACCATTGAAGGAAAGACCCCCNCNCC
NCGACTGTNNTAGATGCANCN
CCCCCCCAGAAGACAGATAATCAAATAAATAGACGTCTA

15

SEQ ID NO: 747

>N71365

AAAGATCCTAACAGAACATAGCGTAACAATATTGGTCTTCCAGGTGTTACTCATT
TCAATTATGTGTAGTATACCAGGACAGACCTATTTTCATGTCTTATTTCTTTAAAG
20 AGCTGCTTCATTGGCCGGGCGCCATGGCTCACGTCTGTAATCCCAGCACTTTGGG
AGGCCGAGGCGGGTTCGGGTACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCAA
ACATGGCGAAACCCCATCTTAATACTAAAAATACAAAAAAATTAGCCGGGTGTGGT
GTACACGCGCCTGTAATCCCAGCTACTTGGGGGGCTCAGGCAGGAGAATTGCCTG
AAGCCAGGAGGCGGAGGTTGCAGTTGAAGCTNAGATTGGGCCATTGCACTCCAG
25 CCTGGGAAACAGAGTGAAGACGCTGTCTAAAAAAAAAAAAAAAAAAAAA

SEQ ID NO: 748

>AA454662

ACCATTTAAAAAACAATTTATATAAATAGATTCTGTATACAAAGAAGAAACACA
30 TATACAGAGTACCCCAATTACCAGTATGGTGGACCCTACCCCTTCTTTTCTGCATT
GGGAAACAGAACAGAGAACAGAAAAAATCATTCCATCTTGCTCTTAATCTTTCC
ACCTATGTGCTCAGTTTTTCAAGTAGAATTTCTATTCTTTGCTGGTGGTCTTTGGTT
TTTTCCAATGTAGGAATCAAGCTTTTCAGTGCAGCTTTGACTTTGTTTGCAACTTC
CAGGTCACAATCTGGAGGAGGCTAGAAAGAATAATGGCACCTCGATTTACACT
35 AGCCAGGACTTCAGGTTCTTCATACCAACATGCTC

SEQ ID NO: 749

>AA450180

TGATCTTCTGTGCCTAGCACAAGAGTTGATACATAAGGAGTACTTTATAAATAAA
40 AAAATGAAAGTGTAGTGATGAGATTCTTTAGCTATCTATCTATATGTATATATC
TGGTTATTCAAAGCTTCCCCACCCCCAGTCATCTAAATTTTTCAGGTATCAAGTGC
TCAACAGACATATGATAGTCAAGGCTCTTAGTCTCATTTTTTACTCTTTGTCAAGA
GAAATGGAAAATAAGAGTACTTGGGCCCTCTTAAGGGAGCTCAGAGAGAATTAC
TAAATTAGGGACAGTTTCAATAGTTATCATTCTGTCTACATGAACGATCAAGACC
45 AGGACTCAGGGAACCTTACTCTGTAACAGAAAGAGAGGATTCAAGTGTGTTGCCCTG
GGAGAATTGTCCATTCTTGTTGCTTCTCTCTG AGTACCCACTAC

SEQ ID NO: 750

>N76338

5 GCGANTGGCATTGAGCTACAGGCAGGAGATGAGGTGGAGTTCTCAGTGATTCTT
AATCAGCGCACTGGCAAGTGAGCGCCCTGTAATGTTTGGCGAGTCTGTGAGGGC
CCCAAGGCTGTTGCAGCTCCTCGACCTGATCGGTTGGTCAATCGCTTGAAGAATA
TCACTCTGGATGATGCCAGTGCTCCTCGCNTAANANGNGNTTCTTCGTCAGCCAN
GGGGACCAGATAACTCAATGGGTTTTTGGTGCAGAAAGAAAGATCCGTCAAGCTG
GTGTCATTGACTAACCACNTCCACAANGCACACCATTTAATCCACTATGATCAAG
TTGGGGGGAATCTGGTNAAGGGTCTGAATATCTCCCTCTTNATCCCTCCCGAAA
10 TCTGGGAATACTTATTCTATTGGNGCTATTACACCAGTTTTAAANACCTTCCNCG
GGGTTATGGTTTTTAAAAAAATAAATAAATTTTAGAAAACCTT
TTAAATAATGCACAGTTGCAGCCTGGNAAAA

SEQ ID NO: 751

15 >M60626

CCCAGAGCAAGACCACAGCTGGTGAACAGTCCAGGAGCAGACAAGATGGAGAC
AAATTCTCTCTCCCCACGAACATCTCTGGAGGGACACCTGCTGTATCTGCTGGC
TATCTCTTCCTGGATATCATCACTTATCTGGTATTTGCAGTCACCTTTGTCCTCGG
GGTCCTGGGCAACGGGCTTGTGATCTGGGTGGCTGGATTCCGGATGACACACAC
20 AGTCACCACCATCAGTTACCTGAACCTGGCCGTGGCTGACTTCTGTTTCACCTCC
ACTTTGCCATTCTTCATGGTCAGGAAGGCCATGGGAGGACATTGGCCTTTCCGGCT
GGTTCCTGTGCAAATTCCTCTTTACCATAGTGGACATCAACTTGTTCCGGAAGTGTC
TTCTCTGATCGCCCTCATTGCTCTGGACCGCTGTGTTTGGCTCCTGCATCCAGTCTG
GACCCAGAACCACCGCACCGTGAGCTGGCCAAGAAGGTGATCATTGGGGCCCTG
25 GGTGATGGCTCTGCTCCTCACATTGCCAGTTATCATTCTGTGACTACAGTACCTG
GTAAACGGGGACAGTAGCCTGCACCTTTAACTTTTCGCCCTGGACCAACGACCC
TAAAGAGAGGATAAATGTGGCCGTTGCCATGTTGACGGTGAGAGGCATCATCCG
GTTTCATCATTGGCTTCAGCGCACCCATGTCCATCGTTGCTGTCAGTTATGGGCTTA
TTGCCACCAAGATCCACAAGCAAGGCTTGATTAAGTCCAGTCGTCCCTTACGGGT
30 CCTCTCCTTTGTGCGCAGCAGCCTTTTTTCTCTGCTGGTCCCCATATCAGGTGGTGG
CCCTTATAGCCACAGTCAGAATCCGTGAGTTATTGCAAGGCATGTACAAAGAAAT
TGGTATTGCAGTGGATGTGACAAGTGCCCTGGCCTTCTTCAACAGCTGCCTCAAC
CCCATGCTCTATGTCTTCATGGGCCAGGACTTCCGGGAGAGGCTGATCCACGCCC
TTCCCGCCAGTCTGGAGAGGGCCCTGACCGAGGACTCAACCCAAACCAGTGACA
35 CAGCTACCAATTCTACTTTACCTTCTGCAGAGGTGGCGTTACAGGCAAAGTGAGG
AGGGAGCTGGGGGACACTTTCGAGCTCCAGCTCCAGCTTCGTCTCACCTTGAGT
TAGGCTGAGCACAGGCATTTCTGCTTATTTTAGGATTACCCACTCATCAGAAAA
AAAAAAAAAAGCCTTTGTGTCCCCTGATTTGGGGAGAATAAACAGATATGAGTTT
ATTATTGACTTCTTTTTTGATTTTGGACCTCAGCCTCGGGTGGTCAGGGTGGGAAA
40 TGATAGGAAGAAGCTGTCATCTGCATCCTAGTTTGCCTGAAATGAACCCAAATAA
TACCCATTATTATTAGTCCTGAATTATGAGTAGTGAATGATACCCATCATTCTGGC
ATCATGATGAGTAGTGTCCACTTCCATTCTGAAAAGTGCCCTGCTGTGAAAAATA
AATTATATAGTCATCCTAGGTAAATGAAGGAGGAGGGAGAAGTGTGAAAGAGTA
TGGCTTAAATCAGACAAGATATACAAGAAGATACTTTATATAGGGCAGGAGCGG
45 TGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGCGGATACCA
GAGGTCAGGAATTTCGAGAACAGCCTGGCCAACATGGTGAAACCCTGTCTCTACT
AAAAATACAAAAATTAGCTGGGCGTAGTGGCAGGCTCCCGTAATCCCAGCTACT
CAGGAGACCGAGGCAGGAGAATCGCTTGGACCTGGAAGGCGGAGGTTGTAGTGA

GCCAAGAAAACGCCACTACACTCCAGCCTGGGTGACAGAGAGAGACTCCGGCTC
AG

SEQ ID NO: 752

5 >X70070

TCAAGCTCGCCCCGCGCAGCCCGAGCCGGGCTGGGCGCTGTCCTCGGGGGCCTG
GGGAACCGCGCGGTTTGGAGATCGGAGGCACCTGGAACCCGTGGCAAGCGCCGA
GCCGGGAGACAGCCCGAGGAACCACGGGTTCTGGAGCTAGGAGCCGGAAGCTG
GGAGTCCGGAGGAGAGCGGAGCCCGGAGCCCGGAGCCCGGGGCGGCGCGTCTG
10 GGTCTGGCGCTTCCCGACTGGACGGCGCGCCCGCTGGTCTTCGCCACGCGCCCTC
CCCTGGGCTCGCGTTCATCGGTCCCCGCCTGAGACGCGCCCACTCCTGCCCGGAC
TTCCAGCCCCGGAGGCGCCGGACAGAGCCGCGGACTCCAGCGCCCAACCATGCGC
CTCAACAGCTCCGCGCCGGGAACCCCGGGCACGCCGGCCGCGGACCCCTTCCAG
CGGGCGCAGGCCCGGACTGGAGGAGGCGCTGCTGGCCCCGGGCTTCGGCAACGCT
15 TCGGGCAACGCGTTCGGAGCGCGTCTGGCGGCACCCAGCAGCGAGCTGGACGTG
AACACCGACATCTACTCCAAAGTGCTGGTGACCGCCGTGTACCTGGCGCTCTTCG
TGGTGGGCACGGTGGGCAACACGGTGACGGCGTTACGCTGGCGCGGAAGAAGT
CGCTGCAGAGCCTGCAGAGCACGGTGCATTACCACCTGGGCAGCCTGGCGCTGT
CCGACCTGCTCACCTGCTGCTGGCCATGCCCGTGGAGCTGTACAACTTCATCTG
20 GGTGCACCACCCCTGGGCCTTCGGCGACGCCGGCTGCCGCGGCTACTACTTCCTG
CGCGACGCCTGCACCTACGCCACGGCCCTCAACGTGGCCAGCCTGAGTGTGGAG
CGCTACCTGGCCATCTGCCACCCCTTCAAGGCCAAGACCCCTCATGTCCCGAAGCC
GCAGCAAGAAGTTCATCAGGGCCATCTGGCTCGCCTCGGCCCTGCTGACGGTGCC
TATGCTGTTACCATGGGGGAGCAGAACCGCAGCGCCGACGGCCAGCAGGCCGG
25 CGGCCTGGTGTGCACCCCCACCATCCACACTGCCACCGTCAAGGTCGTCATACAG
GTCAACACCTTCATGTCTTCATATTCCCCATGGTGGTCATCTCGGTCTCTGAACAC
CATCATCGCCAACAAGCTGACCGTCATGGTACGCCAGGCGGCCGAGCAGGGCCA
AGTGTGCACGGTCGGGGGGCGAGCACAGCACATTACGATGGCCATCGAGCCTGG
CAGGGTCCAGGCCCTGCGGCACGGCGTGCAGCTCCTACGTGCAGTGGTCATCGCC
30 TTTGTGGTCTGCTGGCTGCCCTACCACGTGCGGCGCCTCATGTTCTGCTACATCTC
GGATGAGCAGTGGACTCCGTTCTCTATGACTTCTACCACTACTTCTACATGGTG
ACCAACGCACTCTTCTACGTCAGCTCCACCATCAACCCATCCTGTACAACCTCG
TCTCTGCCAACTTCCGCCACATCTTCTGGCCACACTGGCCTGCCTCTGCCCCGGTG
TGGCGGCGCAGGAGGAAGAGGCCAGCCTTCTCGAGGAAGGCCGACAGCGTGTCC
35 AGCAACCACACCTCTCCAGCAATGCCACCCGCGAGACGCTGTACTAGGCTGTGC
GCCCCGGAACGTGTCCAGGAGGAGCCTGGCCATGGGTCTTGCCCCCGACAGAC
AGAGCAGCCCCCACC CGGAGCCTTGATGGGGGTCAGGCAGAGGCCAGCCTGCA
CTGGAGTCTGAGGCCTGGGACCCCCCCTCCCAACCCCTAACCCATGTTTCTCATT
AGTGTCTCCCGGGCCTGTCCCCAACTCCTCCCCACCCCTCCCCCATCTCCTCTTTG
40 AAAGCCAGAACAAGAGAGCGCTCCTCTCCAGATAGGAAAAGGGCCTCTAACAA
GGAGAAATTAGTGTGCGGCAAAAGGCAGTTTTCTTTGTTCTCAGACTAATGGATG
GTTCCAGAGAAGGAAATGAAATGTGCTGGGTGGGGCCGGGCCTCCGGCGGCCCG
GCTGCTGTTCCCATGTCCACATCTCTGAGGCCTGCACCCCTCTGTCTAGCTCGGG
GAGTCCAGCCCCAGTCCCGCAGGCTCCGTGGCTTTGGGCCTCACGTGCAGACCCT
45 GCCATGCAGACCCATGCCCCCTCCCCAGGCAGCTCCAAGAAAGCTCCCTGACT
CGCCCCCTCAGGCCTGGCAAGCTGGGGGGCCATCGCCGTGGGGAGTCCCTCCAC
CACCTCGCCGCAGGCAGCTGCAGCCCCCAGAGGGGACCACAAGCCCAAAAAGG
ACAAAAATGGGCTGGCCTGGAATGGCCAGACCCAGCCTCCCCTCCTCCCTCCC
ATCTCACCCAGGCCAAGGCCAGGGGCTCTGCCAGGACACCACATGGGAGGGG

GCTCAGGCCTCAGCCTCAAGATCTTCAGCTGTGGCCTCTCGGGCTCGGCAGAAGG
GACGCCGGATCAGGGGCTGGTCTCCAGCACCTGCCCGAGTGGCCGTGGCCAGG
ATGGGGTGCGCATTCCGTGTGCTTTGCTTGTAGCTGTGCAGGCTGAGGTCTGGAG
CCAGGCCCAGAGCTGGCTTCAGGGTGGGGCCTTGAGAAGGGGAATGTGGGACAG
5 GGGCGATGGTGCCTGGTCTCTGAGTAAGATGCCAGGTCCCAGGAAGTCAAGGCTTC
AGGTGAGAAGGAGCGGTGTGTCCAGGCACCGCTGGCCGGCAGCCCTGGGCTGAG
GCACAGACTCATTTGTACCTTCTGGCGGCGGCAGCCCTGGCCCCGGCCTCCAAG
CAGTTGAAAAAGCTGGCGCCTCCTTGGTCTCTAGGATCCAGGCTCCACAGAGCAC
ATGACTAGCCAGGCCCTGGCTTAAGAAGGTGCGCTAAGCCTAAGAGAAGACAG
10 TCCCAGGAGAAGCTGGCCGGGACCAGCCAGGAGCTGGGAGCCACAGGAAGCAA
AAGTCAGCCTTTTCTTCAAGGGATTTCCTGTCTCAGAGCAGCCTTTGCCCCAGG
GAAATGGGCTCTGGGCTGGCTGCCTGCACCGGCCATGTGACCCAGGACCCGGA
CACCTGGTCTTGGGCTGTGTTACGCCACTTTGCCTTCTCTGGACTCAGTTTCCCCG
TCTGAGAAATGAGAGTCGAATGCTACAGTATCTGCAGTCGCTTGGATCTGGCTGT
15 TGAGTTGACGGGTTCTTGAACCCCAACAAATCCCTCTCCAACACAGGACCCTT
CGGCTCACCAAGAACGGGGCCAGGGGAGTCAGGCCTATTCGCTGCACTTCCTG
CCAAACTTTGCCCCCAAGCCTGGTCATCAGCCAGGCAGCCCTCCCAGTGCCCA
AGGGCCACCAACCCAGGGAAACAGGGCCAGCACAGAGGGGCCTTCCTCCCCCA
CAGAGCTCCCATGACATAGTCTGCTCTGGGCGGAAGAGCTTTGCTGCCAGCCAGG
20 GATGTCCAGAGGTGCGGTGCAGCCCTATCCCTGCTCAGGAGTGGGCTCAGAGTCT
AGCAAATGCTAAGGCCCTCAGGCTGGGCTCTGAACGAGGACCTGGACTCAGAG
CCAGACAGGGCAGCCTCAGAGCCTTCTCTGGGGCTCCTGGACCTTGGGGCCATAAT
CTCTGAGCCTCGGTTCCCATCTAAGGAACAGATGTGGTTCGTTCCGCCCTCTCA
AGCTGGATGAGACTGTCTGGAGGATCCACCCCGGAACAGACAGAACGGTGTCTC
25 TCAGGATGGTGTCTCTGAGAGAGGGCAGAGTGGATGCCCCACTGCCCTAGACCCT
CGGTAGACGTGGGGTCTCTGGGGCGGGGTCTGTGGCTGTGACTGAAGTCGGCTTT
CCCGTTGATGTCTTGATGCTCCTATCTGTGCACTTACCGTAGGTAGGGACACGTG
TCCATGCACCACAGACACACCCACGACACCTGATCTCGTATCACTAGCTTGCGGC
CAGGTCATGATGTGGCCCCGGAAGCTGGCCCTGCGTGCCATGAGTGCGTCGGTCA
30 TGGAGTCCGGAGCCCTGAGCCGGCCCTGGTGACGGCACAGCCCTCACAGCTC
AAACGCCACCCCCACTCCACCATCTGCAGGTGGTGAAAACAAACCCCGTGTAT
CTCTCAATAAAGGTGGCCGAAGGGCCTCGATGTGG

SEQ ID NO: 753

35 >X58454

ATGCTGCCGCCAGGCAGCAACGGCACCGCGTACCCGGGGCAGTTCGCTCTATAC
CAGCAGCTGGCGCAGGGGAACGCCGTGGGGGGCTCGGCGGGGGCACCGCCACTG
GGGCCCTCACAGGTGGTCACCGCCTGCCTGCTGACCCTACTCATCATCTGGACCC
TGCTGGGCAACGTGCTGGTGTGCGCAGCCATCGTGCGGAGCCGCCACCTGCGCG
40 CCAACATGACCAACGTCTTCATCGTGTCTCTGGCCGTGTCAGACCTTTTCGTGGC
GCTGCTGGTCATGCCCTGGAAGGCAGTCGCCGAGGTGGCCGGTTACTGGCCCTTT
GGAGCGTTCTGCGACGTCTGGGTGGCCTTCGACATCATGTGCTCCACTGCCTCCA
TCCTGAACCTGTGCGTCATCAGCGTGGACCGCTACTGGGCCATCTCCAGGCCCTT
CCGCTACAAGCGCAAGATGACTCAGCGCATGGCCTTGGTCATGGTCGGCCTGGC
45 ATGGACCTTGTCCATCCTCATCTCCTTATTCCGGTCCAGCTCAACTGGCACAGG
GACCAGGCGGCCTCTTGGGGCGGGCTGGACCTGCCAAACAACCTGGCCAACTGG
ACGCCCTGGGAGGAGGACTTTTGGGAGCCCGACGTGAATGCAGAGAAGTGTGAC
TCCAGCCTGAATCGAACCTACGCCATCTCTTCTCGCTCATCAGCTTCTACATCCC
CGTTGCCATCATGATCGTGACCTACACGCGCATCTACCGCATCGCCAGGTGCAG

ATCCGCAGGATTTCTCCCTGGAGAGGGCCGCAGAGCACGCGCAGAGCTGCCGG
AGCAGCGCAGCCTGCGCGCCCGACACCAGCCTGCGCGCTTCCATCAAGAAGGAG
ACCAAGGTTCTCAAGACCCTGTCGGTGATCATGGGGGTCTTCGTGTGTTGCTGGC
TGCCCTTCTTCATCCTTAACCTGCATGGTCCCTTTCTGCAGTGGACACCCCGAAGGC
5 CCTCCGGCCCGGCTTCCCCTGCGTCAGTGAGACCACCTTCGACGTCTTCGTCTGGTT
CGGCTGGGCTAACTCCTCACTCAACCCCGTCATCTATGCCTTCAACGCCGACTTTC
AGAAGGTGTTTGCCAGCTGCTGGGGTGCAGCCACTTCTGCTCCCGCACGCCGGT
GGAGACGGTGAACATCAGCAATGAGCTCATCTCCTACAACCAAGACATCGTCTTC
CACAAGGAAATCGCAGCTGCCTACATCCACATGATGCCCAACGCCGTTACCCCG
10 GCAACCGGGAGGTGGACAACGACGAGGAGGAGGGTCCTTTCGATCGCATGTTCC
AGATCTATCAGACGTCCCCAGATGGTGACCCTGTTGCTGAGTCTGTCTGGGAGCT
GGACTGCGAGGGGGAGATTTCTTTAGACAAAATAACACCTTTCACCCCGAATGG
ATTCCATTAA

15 SEQ ID NO: 754

>D13538

CCATGGCGTCCCCGGCGCTGGCGGGCGGCGCTGGCGGTGGCGGCAGCGGCCGGGCC
CCAATGCGAGCGGCGCGGGCGAGAGGGGCAGCGGCGGGGTTGCCAATGCCTCGG
GGGCTTCTTGGGGGCCCGCGCGGCCAGTACTCGGCGGGCGCGGTGGCAGGGC
20 TGGCTGCCGTGGTGGGCTTCTCATCGTCTTACCCTGGTGGGCAACGTGCTGGT
GGTGATCGCCGTGCTGACCAGCCGGGCGCTGCGCGCGCCACAGAACCTCTTCTCTG
GTGTGCTGGCCTCGGCCGACATCCTGGTGGCCACGGTGGTCATGCCCTTCTCGT
TGGCCAACGAGCTCATGGCCTACTGGTACTTGGGGCAGGTGTGGTGGGGGTGTA
CCTGGCGCTCGATGTGCTGTTTGCACCTCGTCGATCGTGCATCTGTGTGCCATCA
25 GCCTGGACCGCTACTGGTCCGTGACGCAAGGCCGTCGAGTACAACCTGAAGCGCA
CACCACGCCCGCTCAAGGCCACCATCGTGGCCGTGTGGCTCATCTCGGCCGTCTAT
CTCCTTCCCGCCGCTGGTCTCGCTCTACCGCCAGCCCGACGGCGCCGCCTACCCG
CAGTGCGGCCTCAACGACGAGACCTGGTACATCCTGTCCTCCTGCATCGGCTCCT
TCTTCGCGCCCTGCCTCATCATGGGCCTGGTCTACGCGCGCATCTACCGAGTGGC
30 CAAGCTGCGCACGCGCACGCTCAGCGAGAAGCGCGCCCCCGTGGGCCCGACGG
TGCGTCCCCGACTACCGAAAACGGGCTGGGCGCGGCGGCAGGCGCAGGCGAGAA
CGGGCACTGCGCGCCCCCGCCGCGACGTGGAGCCGGACGAGAGCAGCGCAGC
GGCCGAGAGGCGGCGGCGCCGGGGCGCGTTGCGGCGGGGCGGGCGGCGGCGAG
CGGGCGCCGAGGGGGGCGCGGGCGGTGCGGACGGGCAGGGGGCGGCTGAGTCG
35 GGGGCGCTGACCGCCTCCAGGTCCCCGGGGCCCGGTGGCCGCCTGTGCGCGGCC
AGCTCGCGCTCCGTGAGTTCTTCTGTGCGCGCCGGCGCCGGGCGCGCAGCAGCG
TGTGCCCGCCGAAGGTGGCCCAGGCGCGCGAGAAGCGCTTCACCTTTGTGCTGGC
TGTGGTCATGGGTGTGTTTCGTGCTCTGCTGGTTCCCTTCTTCTTCAGCTACAGCC
TGTACGGCATCTGCCGCGAGGCCTGCCAGGTGCCCGGCCCGCTCTTCAAGTTCTT
40 CTTCTGGATCGGCTACTGCAACAGCTCGCTCAACCCGGTCATCTACACGGTCTTC
AACCAGGATTTCCGGCGATCCTTTAAGCACATCCTCTTCCGACGGAGGAGAAGG
GGCTTCAGGCAGTGACTC

SEQ ID NO: 755

45 >N76944

TGTAAACAGATTGGAGAATCTAGCAATAAGATTCAAAGCTAATCTGGAGCATAA
AGGCACAGTTCAGAGACAGAATAACAGGGATCACAAGCATGAATTAAGGAA
TTTATTTGCTTCAAGTTCCTAGATAACAACCTTCCCATGCTGCACTTCTCCACTGTC

GGAGCACGTTCCGAAAAACAGAATGCCTTGATCCCTGGTGGGTGCGAAGGAGTT
GTTAGGGATGGCAGGCATTGGTG GGC

SEQ ID NO: 756

>AA451716

TTTTGCAAATCAGAGAAATAACACATTAGAAAAAGCAATATGCCTTTTTTTTTT
AAAATGGCACATCAAGTGACTCTCATTTTAAAATATCTCTTTTCTTAACCCTTAAT
TTGAATGCAAAATGATGCTGTGGTCAGAAGGAATGCCAGGTGGCGACCGTGATA
CCTTTAATGACAATAGGAACGTAGCAGAGGGACAACAGCAATGACAACAGAAA
10 GCAGCTGTGATCCAGCAGCAGCTGGCAAAGCTTAGTAAGCAACCTCATCCCCAG
ATGCATCCGCTCAGCCAGTGTTGTGATTGCTAGATACTATCTGTAAGTGAACCAA
ACTAAAATTTCATTTATGAACCAAGAAAGGAAGCCAAGTTGAAAAGGTCTCGAGT
TAAATCGAGAATGATTCAGGCGGGCCGGCTCTCTGAGCA
CCTTTGGATGCACTTCAGCTTCTGTCTTG

SEQ ID NO: 757

>H19264

TCACATTTGAGCTGGTNGCCAGGTTTGCTGTGGCCCCTGACTTCCTCAAGTTCTTC
AAGAATGCCCTAAACCTTATTGACCTCATGTCCATCGTCCCCTTTTACATCACTCT
20 GGTGGTGAACCTGGTNGTGGAGAGCACACCTACTTTAGCCAACTTGGGCAGGGT
GGCCCAGGTCCTGAGGCTGATGCGGATCTTCCGATCTTAAAGCTGGCCAGGCACT
TNCAGTGGCCTCCGCTCGCT
GGGGGGCCACTTTGAAATACAGCTACAAGGAAGTAGGGCTGCTCT

SEQ ID NO: 758

>AA598527

GTATCAGTAGGTAATAGGATATTTTATTTCAAAACAGTGAAGAAGCTGCTAAGCA
TAAAATTTGTCAAATGCTACAAAGGTGATGAATATACAACCTGGGAATTCCAAGA
AATTTAAATTTAATTACATTCTTTATTATCTTTTCTCAAAGAAATAAATTAGTT
30 CCACCATTTGGCTAATATTATTTTCAATTAAGACTGAATTTAGATTTTAGGAAATA
AAATATGGAATCTGTTATAATGTCCCAATTTATACTACAGTATTAATCTCAATCCT
GATCATTACATAATTATAGCATTACCAATCTGTGATTTTATAAATTAACCAAATT
TGTTAAATTAAGAAGAAATTCATAGACACCATTTTTTCTGTTACAACATATGG
AAAAGCCATCAAAAACTTAACAGAACCAATCAAAAAGAAGTATATTTTATGC
35 TAAAGTTACTTTCTGTCCAGGTCGAAACATTGTT

SEQ ID NO: 759

>AA286908

TCAGTGAGATGTCATTTATTAAGCAGTTACAATGCTGCAGGTGCTGTGCAGGAGA
40 CTGGACATACAAAAGAAGAATTTGACCCAGACCTTCCCCCTCGTGGGTGCTCATA
ATCTTGTAGGGGGAAGGGAATACAAATACAAATTAGCGAAGAATGATAGCAGTA
TCTTAGGACACTGTAAGTGTGTGCTACGGGACCCAAGGACTGGAGAGCCATCCCT
TCGTGAAGGTCAGGGAAGAGCTGGGTGGTGGAGAGAGCTGAGCCTGTGTGGACC
CCTGATGCATGCTCTGATGCTGAGGGAGTACAGTAGAGATGGACACTGATAGTG
45 ACAGAAGAGTTTGGCCCCAAAGCAGAAGCGGCATCCTGCACCGACTCCCCTTAG
AATGAATGAGTACGCACAAGAAAACAACCACAGGCATCGCGCATCTTCAGTGGA
TCTCTTTGCTGGAGAATTGACAGAGTGCCTGTGCGCCTGAGTGAGCCGGTAAAT
TCTCTCCTTAAGGATTCTTCTCTTGGTAGCGGTCTCACTCTGCTCTTTGAGCAGCC
AGGAATAGCGATTTTTTTCTGTAGTATCTGCATCATGGCTTTC

SEQ ID NO: 760

>AA280924

5 GGAACACGCTGCGGGGCTCCCGGGCCTGAGCCAGTGTCTGTTCTCCACGCAGGTG
TTCCGCGCGCCCCGTTTCAGCCATGTCGTCCGGCATCCATGTAGAGCTGGTGACTG
GAGGCAACAAGGGCATCGGCTTGGCATCGTGC GCGACCTGTGCCGGCTGTTCTCG
GGGGACGTGGTGCTCACGGCGCGGGACGTGACGCGGGGGCCAGGCGGCGTACAGC
AGCTGCAGGCGGAGGGCCTGAGCCGCGCTTCCACCAGCTGGACATCGACGATCT
GCAGACATCCGCCCCCTGCCNTTCTGCGCAAGGAGTACGGGGGGCCTGGACGTGC
10 TGGTCAACAACGCGGGCATCGCTTCAAGGTTGCTGATCCACACCCTTTCATATT
CAAGCTGAAGTGACGATGAAAACAAATTTCTTTGGTACCCGAGATGTGTGCACA
GAATTACTCCCTCTAATAAAACCCCAAGGGAGAGTGGTGAACGTATCTAG

SEQ ID NO: 761

15 >AA279601

AAAGATGTAAATCGTGGAGGTTACGGCCAAGCCAGTTCATTAAATTCAGGAGT
CAGATTCCAGGTTTATGTAGAAGTTTCTAAAATGAAAATCAATGTTACTGAAATT
CCTGACACATTGCGTGAAGATCAAATGAGAGACAACTAGAGCTGAGCTTTTCA
AAGTCGCGAAATGGAGGCGGAGAGGTGGACCGCGTGGACTATGACAGACAGTCC
20 GGGAGTGCAGTCATCACGTTTGT G

SEQ ID NO: 762

>N22980

25 GTTAAACATGAAAAAAAATTTTATTGTTTTAGACAAAGAGGCCACTTTTGGAAA
ATAATACTTTTTTTTTTTTAGTTGAATCAGGTGAAGACAGAGTTAAAATCACATA
GGATTTGCATTTTTTAAAAAAGGAAAGCACTAGGATTGTTGGCACTGGAGTAACTA
TTTACACTGAACAGAGGTTTGGCCTTTTACATAACATCGATACAATGCATTTTCC
AAAGTCTGAGAAATAACAAGGTTCTGTCTCGAATGCTTCACAGAGGAGGTTCCG
ATTTGGGGACAAGTGTCAATTAATGAGGGCCATGGAAGTTCGTGAGCTTCAGAGTC
30 ACATGCAATCTGATCCTGGGCGGTTCCCCNGCTGGGGAGCACTTGGCTACGGAAT
TGAAAGCTAATGGGGAGGGGTGGGGC

SEQ ID NO: 763

>T61575

35 GATTATATCATGGTATATGAAGCACTGGTGAGGTCTATGTCACCAGAAATTCCCA
GTTTGCTGATTTTCATTGAGTTTTTTAAACCCGATGATNGTACTGCAACAAGTNAGC
ATNNGTCACTGCAACCNAACNNGNGGGGGGGNAGGTNCACCCNNNNNTTNTTTTT
TGAAAGGGTTCCTATTTTCNAANGGGGAAACCGNTNTTTTTCTTCCCTNCCNGT
TATTATCCAGCTTTGTATTGCAAACAATGACTCTCCTGTTGTTCTCATTGAAGCGT
40 GGGGTAAAGTGGGAGGGCAACATCATTCCCTCTTTGGGAAATCTAAGGCAATTC
TGTTTGCATTGGGGCTTCACCGTGCCAGAAATTGTTATCAGCATGCGAGGGGACC
ACTCCCCCGGGGAAAGGGCAGGGTTATAGGGGACAATCAGTGGGCCCGNAGG
GGGNCCATGGGGNCCAGTGGCAGGGGNAGGGTNCCGTGGCNCTTGGCTTT

45 SEQ ID NO: 764

>R23586

AGAACGAGCTGGACCAGAAGAAAGTAAAATATCCCAAATGACAGACCTCAGC
AAGGGTGTGATTGAGGAGCCCAAGTAGCGCCTGCTTNGCGTGGGTGGATCCAAC
ACCAGCCCTGCGTTCGTGGGACTTGCCTCAGATCAGCCTGCGACTGCAAGATTCT

TACTGCAGTAGAGAACTCTTTTTCTCCCTTGTACTTTTTTTTGACCTGGGCATCTTT
TTATAGGGAAAAATGGCCTTTGTAGGCAGTGGAAGAACTTGCAAGGAAAGCTGCC
GTCTCTTTGGGCAGTCTGATGCAGAGCCTGCACTCTGGGCACTTCGCTGGAAGAA
TCTGGGAAGGTTGCGGTTTGCTCTTCCAGTGTTGCGGGGGCCTTGGCTGCTTNAAG
5 GGNTTCGGTCTACCACGGANGGCTTTGCTGTTTAGGG CTGCATCCC

SEQ ID NO: 765

>L08044

CAAGGTCTCGATGTCGTCGGGATCGACGACCTTGGGGTTCGATCGTCACGCCGATC
10 ACCTCCCCGCTGCCTTTGACGACGACCTTGACCAGGCCCCACC GGCTTGACCGT
GCACCTCAGAGTTCGCCAGCTGTTGCTGGGCCTCCAGGAGCTTTTGCTGCATCTG
CTGCGCCTGAGCGAGCAGCGCCGACATGTGCGCTCCGGGTTGCATGACAGTCCCC
TAGCATCTTGGTCTCGAGTTGGTTTCGCCTGTGGTTGTCGGGGCGATTCCGGAACATT
CAGCCTAGACCGCGCCGCGTTACCTTTGCGCCGTGGACCTACGAGTTGGCCCCGCG
15 TGTCGGGTTTCGCCATGATAGTCGGGGTACTCGTCGCAGCAGCGACGCCGATCATC
TCGTCCGCGAGCGCAACCCCCGCCAACATCGCCGGCATGGTCGTCTTCATCGACC
CCGGACACAACGGAGCCAACGACGCATCGATCGGCCGCCAGGTACCCACCGGTC
GCGGCGGCACCAAGAACTGCCAGGCCAGCGGAACGTCAACCAACAGCGGCTACC
CGGAGCACACCTTCACCTGGGAAACCGGGCTGCGGCTGCGGGCCGCGTTGA
20

SEQ ID NO: 766

>H52141

GAGGGAAAGGCTGCTGCCTCCTGCTCTGTCTCATCCCCGGCTTAGCTGACGGGC
CAGAGGGTGGGTGCGAATTCCACCAGCAGGCTGCAACTGAAAAGCAAGGTTGAGA
25 AATGTCAGATATCCTCCGGGAGCTGCTCTGTGTCTCTGAGAAGGCTGCTAACATT
GCCCCGGGCGTGACAGACAGCAGGAAGCCCTCTTCCAGCTGCTGATCGAAGAAAAG
AAAGAGGGGAGAAAAGAACAAGAAGTTTGCAGTTGACTTCAAGACGCTGGGCTGA
TGTACTGGGTACAGGAAGTTATAAAACAGGAATATGGGAGAACAAGTTTTCAG
GGTTTGGAATAAATATTTTTTGGGAGAAGGAATCCAATGGAGNTTAANTATTG
30 ANTGGGGGGGGAAAGGTTT

SEQ ID NO: 767

>U39613

ATGGCAGATGATCAGGGCTGTATTGAAGAGCAGGGGGTTGAGGATTCAGCAAAT
35 GAAGATTCAGTGGATGCTAAGCCAGACCGGTCCTCGTTTGTACCGTCCCTCTTCA
GTAAGAAGAAGAAAAATGTCACCATGCGATCCATCAAGACCACCCGGGACCGAG
TGCCTACATATCAGTACAACATGAATTTTGAAAAGCTGGGCAAATGCATCATAAT
AAACAACAAGAACTTTGATAAAGTGACAGGTATGGGCGTTTCGAAACGGAACAGA
CAAAGATGCCGAGGCGCTCTTCAAGTGCTTCCGAAGCCTGGGTTTTGACGTGATT
40 GTCTATAATGACTGCTCTTGTGCCAAGATGCAAGATCTGCTTAAAAAAGCTTCTG
AAGAGGACCATACAAATGCCGCCTGCTTCGCCTGCATCCTCTTAAGCCATGGAGA
AGAAAATGTAATTTATGGGAAAGATGGTGTACACCAATAAAGGATTTGACAGC
CCACTTTAGGGGGGATAGATGCAAAACCCTTTTAGAGAAACCCAAACTCTTCTTC
ATTCAGGCTTGCCGAGGGACCGAGCTTGATGATGCCATCCAGGCCGACTCGGGG
45 CCCATCAATGACACAGATGCTAATCCTCGATACAAGATCCCAGTGGAAGCTGACT
TCCTCTTCGCCTATTCCACGGTTCAGGCTATTACTCGTGGAGGAGCCCAGGAAG
AGGCTCCTGGTTTGTGCAAGCCCTCTGCTCCATCCTGGAGGAGCACGGAAAAGAC
CTGGAAATCATGCAGATCCTCACCAGGGTGAATGACAGAGTTGCCAGGCACTTT

GAGTCTCAGTCTGATGACCCACACTTCCATGAGAAGAAGCAGATCCCCTGTGTGG
TCTCCATGCTCACCAAGGAAGTCTACTTCAGTCAATAG

SEQ ID NO: 768

5 >H91337

TGGTATGCAAGTCAGCTTTGNCTCACAGTTGAAAATGTTCCGGTCATGATTGCTTTT
GAAACCAAAGGGGAAGGTACCGATATCATTGAGCTATTTAAAGTTGCCAGTTTG
GGCTCCAGTAATGCTTTCTGGTGGGTAAAATTCCACATTCAGGCCACGAGAGCAT
CTACAGTTTGTACTCTGGGGCTGCAGGCATCCTGGGACGCTGTACGCAATTCAGT
10 GGTCTAGTCCTTTATACCGACTCAGATTCCTTAAGCATGCAGAGTCACTCGAATG
AAAAAA

SEQ ID NO: 769

>M29870

15 ATGCAGGCCATCAAGTGTGTGGTGGTGGGAGACGGAGCTGTAGGTAAAACCTTGC
CTACTGATCAGTTACACAACCAATGCATTTCCCTGGAGAATATATCCCTACTGTCTT
TGACAATTATTCTGCCAATGTTATGGTAGATGGAAAACCGGTGAATCTGGGCTTA
TGGGATACAGCTGGA1CAAGAAGATTATGACAGATTACGCCCCCTATCCTATCCG
CAAACAGATGTGTTCTTAATTTGCTTTTCCCTTGTGAGTCCTGCATCATTTGAAAA
20 TGTCCGTGCAAAGTGGTATCCTGAGGTGCGGCACCACTGTCCCAACACTCCCATC
ATCCTAGTGGGAATAAATTTGATCTTAGGGATGATAAAGACACGATCGAGAAA
CTGAAGGAGAAGAAGCTGACTCCCATCACCTATCCGCAGGGTCTAGCCATGGCT
AAGGAGATTGGTGCTGTAAAATACCTGGAGTGCTCGGCGCTCACACAGCGAGGC
CTCAAGACAGTGTGTTGACGAAGCGATCCGAGCAGTCCTCTGCCCCGCTCCCGTGA
25 AGAAGAGGAAGAGAAAATGCCTGCTGTTGTAA

SEQ ID NO: 770

>AA454652

TAAGTTGTAAAAAAATTTTGTATTTATAAATGAATTACACAATAAAATAATTA
30 TTTTAAAAAGTCACAAATACAATCGTTGTATAAAGTCATTTTGGCATCAAGTATC
TCTTAAATATGTTGCAAACCTATTTTCCAAAGAGATGTGGTCCAAACCCTCTGAAG
GCTTTATAATTTTGTATTAGATAACAAGTGAACAAAACCTGACAATAAATACTCCA
ACAATTATTTTAAATAAC
TAAGTGGCAAATGCTATTCTAAGTGGCAAACAATC
35

SEQ ID NO: 771

>AA424315

AGGTCCCATTACAAAGCATGGTGAAATAGATTATGAAGCAATTGTGAAGCTTTCG
GATGGCTTTAATGGAGCAGATCTGAGAAATGTTTGTACTGAAGCAGGTATGTTTCG
40 CAATTCGTGCTGATCATGATTTTGTAGTACAGGAAGACTTCATGAAAGCAGTCAG
AAAAGTGGCTGATTCTAAGAAGCTGGAGTCTAAATTGGACTACAAACCTGTGTA
ATTTACTGTAAGATTTTGTATGGCTGCATGACAGATGTTGGCTTATTGTAAAAAT
AAAGTTAAAGAAAATAATGTATGTATTGGCAATGATGTCATTAAAAGTATATGA
ATAAAAATATGAGTAACATCATAAAAATTAGTAATTCAACTTTTAAGATACAGA
45 AGAAATTTGTATGTTTGTAAAGTTGCATTTATTGCAGCAAG

SEQ ID NO: 772

>AA460727

TAATAGTGGTTAAAAAAACTTTAATTTACTTTGTTGAGTCAGAGGGTTGTAAAA

AAAATTATTGCTAAAGTAGATATCAGGCAAACAGAAAGGTGCTTTAGAAAGTCCA
GTTACCTTGGAGTTTATTTAAACTAAGAGAAAAAAGTCATAATGTTTTTCATGCAA
TACATACTTGGTTCTCCAAATAACAACCTGTGTGACATATAGCAGAAGGAATTAAG
GAATGCTGCACTTGTGATCCATACAAAACACCAACATTTTAGGTTGTACATAATT
5 AGAGAAATATCTGAAACACTTTTTAAAACACTGTAGTAGCCAATACATAGAGGC
ATGCCGTAGTGGGCACAGGAATGCAGTTTAGAAAAAGAAGANAAAAAATCA
CATAGGAACACTCAATTTCTTTAAAATCACTGAGCAAGAACAGCAACATTGAAC
TTTCATACTGATTTTACACAACCTTCTATACAGTACCTTGACTTAAATCCAAGAGCA
AAAGTTAAGACTCTCCTCCTCTATTTTTTGGTAAACAACCTGCATGGTAAACTTAGA
10 TGACTCTTCCCCCTGGATTTTACCT

SEQ ID NO: 773

>L15189

CCTGCCTCGTACTCCTCCATTTATCCGCCATGATAAGTGCCAGCCGAGCTGCAGC
15 AGCCCGTCTCGTGGGCGCCGCAGCCTCCCGGGGCCCTACGGCCGCCGCCACCA
GGATAGCTGGAATGGCCTTAGTCATGAGGCTTTTAGACTTGTTTCAAGGCGGGAT
TATGCATCAGAAGCAATCAAGGGAGCAGTTGTTGGTATTGATTTGGGTACTACCA
ACTCCTGCGTGGCAGTTATGGAAGGTAAACAAGCAAAGGTGCTGGAGAATGCCG
AAGGTGCCAGAACCACCCCTTCAGTTGTGGCCTTTACAGCAGATGGTGAGCGACT
20 TGTGGAATGCCGGCCAAGCGACAGGCTGTCACCAACCCAAACAATACATTTTAT
GCTACCAAGCGTCTCATTGGCCGGCGATATGATGATCCTGAAGTACAGAAAGAC
ATTAAAAATGTTCCCTTTAAAATTGTCCGTGCCTCCAATGGTGATGCCTGGGTG
AGGGTCAATGGGAAATTGTATTCTCCGAGTCAGATTGGAGCATTGTGTGATGAA
GATGAAAGAGACTGCAGAAAATTAATTGGGGCACACAGCAAAAAATGCTGTGAT
25 CACAGTCCCAGCTTATTTCAATGACTCGCAGAGACAGGCCACTAAAGATGCTGGC
CAGATATCTGGACTGAATGTGCTTCGGGTGATTAATGAGCCACAGCTGCTGCTC
TTGCCTATGGTCTAGACAAATCAGAAGACAAAGTCATTGCTGTATATGATTTAGG
TGGTGGAACCTTTTGATATTTCTATCCTGGAAATTCAGAAAGGAGTATTTGAGGTG
AAATCCACAAATGGGGATACCTTCTTAGGTGGGGAAGACTTTGACCAGGCCTTGC
30 TACGGCACATTGTGAAGGAGTTCAAGAGAGAGACAGGGGTTGATTTGACTAAAG
ACAACATGGCACTTCAGAGGGTACGGGAAGCTGCTGAAAAGGCTAAATGTGAAC
TCTCCTCATCTGTGCAGACTGACATCAATTTGCCCTATCTTACAATGGATTCTTCT
GGACCCAAGCATTGGAATATGAAGTTGACCCGTGCTCAATTTGAAGGGATTGTCA
CTGATCTAATCAGAAGGACTATCGCTCCATGCCAAAAAGCTATGCAAGATGCAG
35 AAGTCAGCAAGAGTGACATAGGAGAAGTGATTCTTGTGGGTGGCATGACTAGGA
TGCCCAAGGTTTACGAGACTGTACAGGATCTTTTTTGGCAGAGCCCCAAGTAAAGC
TGTCAATCCTGATGAGGCTGTGGCCATTGGAGCTGCCATTACAGGGAGGTGTGTTG
GCCGGCGATGTCACGGATGTGCTGCTCCTTGATGTCACCTCCCCTGTCTCTGGGTAT
TGAAACTCTAGGAGGTGTCTTTACCAAACCTTATTAATAGGAATACCACTATTCCA
40 ACCAAGAAGAGCCAGGTATTCTTACTGCCGCTGATGGTCAAACGCAAGTGGAA
ATTAAAGTGTGTCAGGGTGAAAGAGAGATGGCTGGAGACAACAACTCCTTGA
CAGTTTACTTTGATTGGAATTCCACCAGCCCCTCGTGGAGTTCCTCAGATTGAAG
TTACATTTGACATTGATGCCAATGGGATAGTACATGTTTCTGCTAAAGATAAAGG
CACAAGACGTGAGCAGCAGATTGTAATCCAGTCTTCTGGTGGATTAAAGCAAAGA
45 TGATATTGAAAATATGGTTAAAAATGCAGAGAAATATGCTGAAGAAGACCGGCG
AAAGAAGGAACGAGTTGAAGCAGTTAATATGGCTGAAGGAATCATTACGACAC
AGAAACCAAGATGGAAGAATTCAAGGACCAATTACCTGCTGATGAGTGCAACAA
GCTGAAAGAAGAGATTTCCAAAATGAGGGAGCTCCTGGCTAGAAAAGACAGTGA
AACAGGAGAAAATATTAGACAGGCAGCATCCTCTCTTCAGCAGGCATCATTGAA

GCTGTTTCGAAATGGCATACAAAAAGATGGCATCTGAGCGAGAAGGCTCTGGAAG
TTCTGGCACTGGGGAACAAAAGGAAGATCAAAAGGAGGAAAAACAGTAATAAT
AGCAGAAATTTTGAAGCCAGAAGGACAACATATGAAGCTTAGGAGTGAAGAGAC
TTCC

5

SEQ ID NO: 774

>W60890

TTCAAGTACATCATAATCGGCGACACAGGTGTTGGTAAATCATGCTTATTGCTAC
AGTTTACAGACAAGAGGTTTCAGCCAGTGCATGACCTTACTATTGGTGTAGAGTT
10 CGGTGCTCGAATGATAACTATTGATGGGAAACAGATAAAACTTCAGATATGGGA
TACGGCAGGGCAAGAATCCTTTCGTTCCATCACAAGGTCGTATTACAGAGGTGCA
GCAGGAGCTTTACTAGTTTACGATATTACACGGAGAGATACATTCAACCACTTGA
CAACCTGGTTAGAAGATGCCCGCCAGCATTCCAATTCCAACATGGTCATTATGCT
TATTGGAAATAAAAGTGATTTAGAATCTAGAAGAGAAGTAAAAAAGAAGAAG
15 GTGAAGCTTTTGCACGAGAACATGGACTCATCTTCATGGAAACGTCTGCTAAGAC
TGCTTCCAATGTAGAAGAGGCATTTATTAATACAGCAAAAGAAATTTATGAAAA
AATTCAAGAAGGAGCTTTGACATTAATAATGAGGCCAATGGCATTAAAATTGGC
CCTCAGCATNTGTTACCATGCCACACATGCAGGCNATCAGGGAGGCCANCAGCTG
GGGCNGCTCTGTTGANTCTGTTTATGCTANTGCCACGGGCTTCTCCCTTATCTTAN
20 CCTTCCTCTGGNACTGGNTGACCTTTGAAAGGTTTGCCAGAGATTANCCGCAATC
T

SEQ ID NO: 775

>AA287196

25 GTACACTGGTGTGGACAGAGCAGCTTGGCTTTTCATGTGCCACCTACTTACCT
ACTACCTGCGACTTTCTTTTCTTGTCTAGCTGACTCTTCATGCCCTAAGATT
TAAGTACGATGGTGAACGTTCTAATTTTCAGAACCAATTGCGAGTCATGTAGTGTG
GTAGAATTAAGGAGGACACGAGCCTGCTTCTGTTACCTCCAAGTGGTAACAGG
ACTGATGCCGAAATGTCACCAGGTCCTTTTTCAGTCTTCACAGTGGAGAACTCTTGG
30 CCAAAGGTTTTTGGGGGGAGGAGGAGGAAACCAGCTTTCTGGTTAAGGTTAACA
CCAGATGGTGCCCCCTCATTGGTGTCTTTTAAAAAATATTTACTGTAGTCCAATA
AGATAGCAGCTGTACAAAATGACTAAAATAGATTGTAGGATCATATGGCGTATA
TCTTGTTTCATCTTCAAAATCAGAGACTGAGCTTTGAAACTAGTGGTTTTTAATCA

35 SEQ ID NO: 776

>T97257

TTTCAAANTTAGTTTTTTATTTTATTGTAAAACATTGAGATGGAATGATAGGGTTTC
CCAGAATCAGGTCCATATTTTAACTAAATGAAAATTATGATTTATAGCCTTCTCA
AATACCTGCCATACTTGATATCTCAACCAGAGCTAATTTTACCTCTTTACAAATTA
40 AATAAGGCAAGTAACTGGGATCCACAATTTATAATACCTGGTCAATTTTTTCTGT
ATTTAAACCTCTATCATAGGTTTAAAGGCCTATTGGGGGGACTTTAATCCCTTACC
AAATAAACAGGGGTTTAAATCACCCTCATGGGGGGCACTGCCCTTCTGGGGG
TTTTCTTCTTTGGACTTAAACCAATCTGGGAATGGCTTAGGGGATTTTCCC

45 SEQ ID NO: 777

>W96114

GTTACGGAGGCGGCTACGGTGGCCAGAGCAGCATGAGTGGATACGACCAAGTTT
TACAGGAAAACCTCCAGTGATTTTCAATCAAACATTGCATAGGTAACCAAGGAGC
AGTGAACAGCAGCTACTACAGTAGTGAAGCCCGTGCATCTATGGGCGTGAACG

GAATGGGAGGGTTGTCTAGCATGTCCAGTATGAGTGGTGGATGGGGAATGTAAT
TGATCGATCCTGATCACTGACTCTTGGTCAACCTTTTTTTTTTTTTTTTCTTTAA
GAAAACCTTCAGTTTAACACGTTTCTGCAATACAAGCTTGTGATTTATGCTTACTCT
AAGTCGGAAATCAGGATTGTTATGAAGACTTAAGGCCAGTATTTTTGAATACAA
5 TACTCATCTAGGATGTAACAGTGAAGCTGAGTAAACTATAACTGTTAAACTTAAG
TTCCAGCTTTTCTCAAGTTAGTTATA

SEQ ID NO: 778

>AA486836

10 GAAAACCTATGGCATAGAATGGCATTCTGTGCGGGATAGCGAAGGGCAGAACTG
CTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAAGATGACTTTAGCCCAA
TTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGT
ATATTTGACGGTCACCAAGGAATCTGGGAACAGCATCGTGCTCTTGTTAAATG
ATCAGCACCAGGGCGGCCAGCGGGCTCTACCGAGCGATAACAGAGACGCACGCA
15 TTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTATAGCCGTGACT
TGAAGGGCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGCAAGAAA
TATGTCTTTGATATT

SEQ ID NO: 779

>L24470

20 GTGCGCGGAGGGGACGAGCGGCTGGACCACAGCCGGCGCCCGATCAGGATCTCC
GCGCTGGGATCGGTGGAACCTTGAGGCAGCGGCGGCGCGGGGCGCCATGGCACAC
CGAGCGGCTCCGTCTTCTGCTCCTCAGAGAGCCCGGCTGGCGGCTGGGATGACA
AGATGTCTGGACTGCAATCCTGCACAGTTTTGAGAGGGAGATGACTTGAGTGGTT
25 GGCTTTTATCTCCACAACAATGTCCATGAACAATTCCAAACAGCTAGTGTCTCCT
GCAGCTGCGCTTCTTTCAAACACAACCTGCCAGACGGAAAACCGGCTTTCCGTAT
TTTTTTCAGTAATCTTCATGACAGTGGGAATCTTGTCAAACAGCCTTGCCATCGCC
ATTCTCATGAAGGCATATCAGAGATTTAGACAGAAGTCCAAGGCATCGTTTCTGC
TTTTGGCCAGCGGCCTGGTAATCACTGATTTCTTTGGCCATCTCATCAATGGAGCC
30 ATAGCAGTATTTGTATATGCTTCTGATAAAGAATGGATCCGCTTTGACCAATCAA
ATGTCCTTTGCAGTATTTTTGGTATCTGCATGGTGTCTTCTGGTCTGTGCCCACTTC
TTCTAGGCAGTGTGATGGCCATTGAGCGGTGTATTGGAGTCACAAAACCAATATT
TCATTCTACGAAAATTACATCCAAACATGTGAAAATGATGTAAAGTGGTGTGTGC
TTGTTTGCTGTTTTCATAGCTTTGCTGCCCATCCTTGGACATCGAGACTATAAAAT
35 TCAGGCGTCGAGGACCTGGTGTCTTACAACACAGAAGACATCAAAGACTGGGA
AGATAGATTTTATCTTCTACTTTTTTCTTTTCTGGGGCTCTTAGCCCTTGGTGTTC
ATTGTTGTGCAATGCAATCACAGGAATTACACTTTTAAGAGTTAAATTTAAAAGT
CAGCAGCACAGACAAGGCAGATCTCATCATTTGGAAATGGTAATCCAGCTCCTG
GCGATAATGTGTGTCTCCTGTATTTGTTGGAGCCATTTCTGGTTACAATGGCCAA
40 CATTGGAATAAATGGAAATCATTCTCTGGAAACCTGTGAAACAACACTTTTTGCT
CTCCGAATGGCAACATGGAATCAAATCTTAGATCCTTGGGTATATATTCTTCTAC
GAAAGGCTGTCCTTAAGAATCTCTATAAGCTTGCCAGTCAATGCTGTGGAGTGCA
TGTCATCAGCTTACATATTTGGGAGCTTAGTTCCATTAAAAATTCCTTAAAGGTTG
CTGCTATTTCTGAGTCACCAGTTGCAGAGAAATCAGCAAGCACCTAGCTTAATAG
45 GACAGTAAATCTGTGTGGGGCTAGAACAAAAATTAAGACATGTTTGGCAATATTT
CAGTTAGTTAAATACCTGTAGCCTAACTGGAAAATTCAGGCTTCATCATGTAGTT
TGAAGATACTATTGTCAGATTCAGGTTTTGAAATTTGTCAAATAAACAGGATAAC
TGACATTTTCAACTTGTTTTTGCCAATGGGAGGTAGACACAATAAAATAATGCC
ATGGGAGTCACACTGAAAGCAATTTTGAGCTTATCTGTCTTATTTATGCTTTGAGT

GAATCATCTGTTGAGGTCTAATGCCTCTACTTGGCCTATTTGCCAGAGAACATCTT
AATGCAGCCTGCATAGTGAAATGGTTATTTTGTAGATCACCGCTCTGTAGCTAACC
CTTATAAACTAGGCTCAGTAAAATAAAGCACTCTTATTTTTTGTATCTGGCCTATTT
TGCCCCTCATTGTGTAGCCTCAATTAACACATGCATGGTCATGACACCCAGAATT
5 CATGATGGTTTGTATAACAACCTCTGCATATTCCAGGTCTGGCAGACAGGTTGC
CTGACCCTGCAATCCTATCTAGAATGGGCCCATTCTTGTACATTTGACAAATAG
GACTGCCTACATTTATTATTATGAAGGTTCGATTGTTGTTGGAAGTGTTTTTTCATG
TCATAGATTAGCAATTTTCAAATAATTATTTTTTCTCTGAAAATTTTGTGTGTGAT
TGCACAATAAATAATTTTTAGAGAAACAAAGGCTCTTTCTCAGCACATTGATGGG
10 CAACTAGAATTACAGCAGTTTCAAACCTCTACCATGGATAATGCAAACAAACCGA
AGCTACATGCCAATGATAGGTGCAAAGAATATTGGCAAAGGTTGCTTTACCTTG
AGCCATTATTTGTGTGTCAGAGAACAAAGAAACAGAATCAATATATAAATTCAAA
GACTATCTGCAGCTAGTGTGTTTCTTCTTTACACACATATACACACAGACATCAG
AAAATTCTGTTGAGAGCAGGTTTCATTAAATTTGTAAGATGGCATATTCTAAAGCC
15 TGTGCTACCAGTACTAAGAGGGGAAGACTGGCAATTTGCCAAGCACTTGGGGAT
TATTATAACAATTAAGTAGGAGATCAAGAGATAATAATCTCTCCCCAAATTTTCC
AATAATAATTGAG

SEQ ID NO: 780

20 >T61078
GACAATTTAATTGCAAAGACACAGAATATTAAGGCATAACAAAGTAAACTGAA
ATGAAGTTTAGTTATCAATATTCATCTCTGAGAAAGTTGTGAATCAGTTCCTTTAG
ATAACATGTGGCTCAGGTTGATTTAATAATGGGGCTGGGGTGTCTGCATCTCTAT
GCTGCTTTTCCAGCACTGTACTGCCTGTAGTGGAAAGACTCTTGGAGTCCACCT
25 TGCAGAGATTCTGCACAGCTTCAGCCAAAAAGTTTGGGNCACCCCGAAATTAG
GTGAGGGAGAGGG

SEQ ID NO: 781

>S40706

30 AGAGACTTAAGTCTAAGGCACTGAGCGTATCATGTTAAAGATGAGCGGGTGGCA
GCGACAGAGCCAAAATCAGAGCTGGAACCTGAGGAGAGAGTGTTCAGAAGGA
AGTGTATCTTCATACATCACACACCTGAAAGCAGATGTGCTTTTCCAGACTGAT
CCAAGTGCAGAGATGGCAGCTGAGTCATTGCCTTTCTCTTCGGACACTGTCAGCT
GGGAGCTGGAAGCCTGGTATGAGGACCTGCAAGAGGTCCTGTCTTCAGATGAAA
35 ATGGGGGTACCTATGTTTCACCTCCTGGAAATGAAGAGGAAGAATCAAAAATCT
TCACCACTCTTGACCCTGCTTCTCTGGCTTGGCTGACTGAGGAGGAGCCAGAACC
AGCAGAGGTCACAAGCACCTCCCAGAGCCCTCACTCTCCAGATTCCAGTCAGAG
CTCCCTGGCTCAGGAGGAAGAGGAGGAAGACCAAGGGAGAACCAGGAAACGGA
AACAGAGTGGTCATTCCCCAGCCCGGGCTGGAAAGCAGCGCATGAAGGAGAAAG
40 AACAGGAGAATGAAAGGAAAGTGGCACAGCTAGCTGAAGAGAATGAACGGCTC
AAGCAGGAAATCGAGCGCCTGACCAGGGAAGTAGAGGCGACTCGCCGAGCTCTG
ATTGACCGAATGGTGAATCTGCACCAAGCATGAACAATTGGGAGCATCAGTCCC
CCACTTGGGCCACACTACCCACCTTTCCAGAAAGTGGCTACTGACTACCTCTCA
CTAGTGCCAATGATGTGACCCTCAATCCACATACGCAGGGGGAAGGCTTGGAG
45 TAGACAAAAGGAAAGGTCTCAGCTTGTATATAGAGATTGTACATTTATTATTAC
TGTCCCTATCTATTAAAGTGACTTTCTAT

SEQ ID NO: 782

>H25907

GGTGAACCAGNNTNTTTATCAGTTTATTAATCTATTTTTAATATATAGACTTTTCA
GTAGACAACAGCATAAAACATATTCTTTTCAAGTTCAAATTGAACTTTCACCAAC
5 ATAGACCATATTCTGGGCCATAAAATAAACATTGGCAAATTTAAAATAATTGAA
ATCATATTAAGTTTGTCTCTGACCCTGATAGAGGTAAGCCAGAAATCAAGANCA
GAAAGATATCTAGAAAAATCCCAAATAATTTGGAAGTAAAAGANCACAATTTTA
AATAAACCATGGGGCCAAAGGNAAAGGTCACAGGGGGAANCTCTTAGGNACTG
GANCTAAAATAGGGGGGNATTTTAC

10

SEQ ID NO: 783

>N90246

TTTTTTGTAGTGCCTGCAGCCCTCATGGGTCTGGGATGGAGGCAGAAAATCAGTTC
CTGTTTATTTACAAAAATATATATATGTGTATGTATGTATATATATTAACCCCTCA
15 GCTCCCTCCCATGATCATCCTTTTACTTCTACCCCCACCTCCCTTTTAAAACAAAG
AGGTTTTCTGGGGTGCAGAGAGGGTTCTCCTGAAAGTGGGCAGAAGCAGCACCG
ATAGCCTAGTCTGGCAGGTTGTGGGAAGGGGCGCAGGGAGTGACCATGAGCGAC
CTTGGCCCCGTCCTTGCTCCTTGACCCCTGATTGGGGCATGGGGTGAGAGGAGGG
ATCAGTCCTTGAATCCCTGAATACTGCAAA
20 GAATGCGCTTCTGGTGCCCGGGCAGTGT

20

SEQ ID NO: 784

>H84113

GATTCGGAACGAGGGATGGGAGANGGCGCGGTGTTGCCCTGGTGCTGCCGCT
25 GCANCCCGNATCCGCCTGGCACAAGGGCTCTGGCTCCTCTCCTGGCTGCTGGCGC
TGGCTGGTGGCGTCATCCTCCTCTGTAGTGGGCACCTCCTGGTCCAGCTAAGGCA
CCTTGGCACCTTCCTGGCTCCCTCCTGTCAAGTCCCTGTCCTGCCCCAGGCTGCCC
TGGCACGGNGCGCGGTTGGCTCTGGGCACAGGACTAGTGGGTGTAGGAGCCAGC
CGGGCAAGTCTGAATGCAGCTCTATACCCTNCCTGGGCGAGGGGTCTGGGGCC
30 CGCTTGCTGGTGGCTGGCACGGCTTNGTT

30

SEQ ID NO: 785

>AA477082

AGAGAGTATATTGCTGCTTTTCTCAGTCACTTTGGCACAGGTGTCGTGGAATATG
35 ATGCAGAAGGCTTTACAAAACCTCACTCTGCTGCTGATGTGGAAAGATTTTGT
TCTTGACACATTGACCTGCCTCTGTTTTTCCCTCGAGACCAGCCAACTCTCACAT
TTCAGTCCGTTTATCACTTTACCAACAGTGGACAGCTTTACTCCCAGGCCCAAAA
AAATTATCCGTACAGCCCCAGATGGGATGGAAATGAAATGGCCAAAAGAGCAAA
GGCTTATTTCAAAACCTTTGTCCCTCAGTTCAGGAGGCAGCATTGCCAATGGA
40 AAGCTCTAGGAAACACCAGTCTTGAGAGGTGGCCAGCCAGACTGCCTGTCCACA
TGCGTGTCAGCACATACAGCCGCTTCCTGGAAGC

40

SEQ ID NO: 786

>Z73903

GAATTCCGATCTCTCGTCCTCTTCCTGGGCTAGGCCGCCCCAGGCGCGGCCCTG
45 CGACTCCTGGCACGGCCCCGTGCTCGGCTGCCGCCCTGGCGCGCGCCCACTGTC
GTCCCCGGACGGGCGCGGACCGGCTCGGCCGGGGCGCCGGCGGCTGGGGAGGG
GTCGCTGGCCCCGGGGCCGCGCATGCGCCGCCACCAACTTGGGGCTGTCAAGTGG
AGGGCGAGTGCTGGTTCTCAGGGGAGGCGACGCCTTCGGGCCAACGGGCCTCGA

45

GCCGAGGCAGCAGTGGGAACGACTCATCCTTTTTCCAGCCCTGGGGCGTGGCTGG
GGTCGGGGTTCGGGGTTCGGGGGCCGGTGGGGGGCCCCGCCCCCGTCTCCTGGCCTGC
CCCCTTCATGGGGCCGCGATGATGGCGGCCCTGTACCCGAGCACGGACCTCTCGGG
CGCCTCCTCCTCCTCCCTGCCTTCCCTCTCCATCCTCTTCCCTCGCCGAACGAGGTGA
5 TGGCGCTGAAGGATGTGCGGGAGGTGAAGGAGGAGAATACGCTGAATGAGAAG
CTTTTCTTGCTGGCGTGCGACAAGGGTGACTATTATATGGTTAAAAAGATTTTGG
AGGAAAACAGTTCAGGTGACTTGAACATAAATTGCGTAGATGTGCTTGGGAGAA
ATGCTGTTACCATAACTATTGAAAACGAAAACCTTGGATATACTGCAGCTTCTTTT
GGACTACGGTTGTCAGAACTAATGGAACGAATTCAGAATCCTGAGTATTCAAC
10 AACTATGGATGTTGCACCTGTCATTTTAGCTGCTCATCGTAACAACTATGAAATT
CTTACAATGCTCTTAAACAGGATGTATCTCTACCCAAGCCCCATGCAGTTGGCT
GTGAATGCACATTGTGTTCTGCAAAAAACAAAAAGGATAGCCTCCGGCATTCCA
GGTTTCGTCTTGATATATATCGATGTTTGGCCAGTCCAGCTCTAATAATGTTAACA
GAGGAGGATCCAATTCTGAGAGCATTGAACTTAGTGCTGATTTAAAAGAACTA
15 AGTCTTGTGGAGGTGGAATTCAGGAATGATTATGAGGAACTAGCCCGGCAATGT
AAAATGTTTGCTAAGGATTTACTTGCACAAGCCCGGAATTCTCGTGAATTGGAAG
TTATTCTAAACCATACGTCTAGTGACGAGCCTCTTGACAAACGGGGATTATTAGA
AGAAAGAATGAATTTAAGTCGTCTAAACCTTGCTATCAAATATAACCAGAAAGA
GTTTGTCTCCAGTCTAACTGCCAGCAGTTTCTGAACACTGTTTGGTTTGGACAG
20 ATGTCGGGTACCGACGCAAGCCACCTGTAAGAAGATAATGACTGTTTTGACAG
TAGGCATCTTTTGGCCAGTTTTGTCACTTTGTTATTTGATAGCTCCCAAATCTCAG
TTTGGCAGAATCATTACACACCTTTTATGAAATTTATCATTTCATGGAGCATCATA
TTTCACATTTCTGCTGTTGCTTAATCTATACTCTCTTGTFTTACAATGAGGATAAGA
AAAACACAATGGGGCCAGCCCTTGAAAGAATAGACTATCTTCTTATTCTGTGGAT
25 TATTGGGATGATTTGGTCAGACATTAAAAGACTCTGGTATGAAGGGTTGGAAGA
CTTTTTAGAAGAATCTCGTAATCAACTCAGTTTTGTTCATGAATTCTCTTTATTTGG
CAACCTTTGCCCTCAAAGTGGTTGCTCACAACAAGTTTCATGATTTTGTCTGATCG
GAAGGATTGGGATGCATTCCATCCTACACTGGTGGCAGAAGGGCTTTTTGCATTT
GCAAATGTTCTAAGTTATCTTCGTCTCTTTTTTATGTATACAACCAGCTCTATCTT
30 GGGTCCATTACAGATTTCAATGGGACAGATGTTACAAGATTTTGGAAAATTTCTT
GGGATGTTTCTTCTTGTTTTGTTTTCTTTCACAATTGGACTGACACAACCTGTATGA
TAAAGGATATACTTCAAAGGAGCAGAAGGACTGTGTAGGCATCTTCTGTGAACA
GCAAAGCAATGATACCTTCCATTTCGTTTCATTGGCACCTGCTTTGCTTTGTTCTGGT
ATATTTTCTCCTTAGCGCATGTGGCAATCTTTGTCAACAAGATTTAGCTATGGAGA
35 AGAACTGCAGTCCTTTGTGGGAGCTGTCATTGTTGGTACATACAATGTCGTGGTT
GTGATTGTGCTTACCAAACCTGCTGGTGGCAATGCTTCATAAAAGCTTTCAGTTGA
TAGCAAATCATGAAGACAAAGAATGGAAGTTTGTCTCGAGCAAAATTATGGCTTA
GCTACTTTGATGACAAATGTACGTTACCTCCACCTTTCAACATCATTCCCTCACCA
AAGACTATCTGCTATATGATTAGTAGCCTCAGTAAGTGGATTTGCTCTCATACAT
40 CAAAAGGCAAGGTCAAACGGCAAAACAGTTTAAAGGAATGGAGGAATTTGAAA
CAGAAGAGAGATGAAAACCTATCAAAAAGTGATGTGCTGCCTAGTGCATCGTTAC
TTGACTTCCATGAGACAGAAGATGCAAAGTACAGATCAGGCAACTGTGGAAAAT
CTAAACGAACTGCGCCAAGATCTGTCAAAATTCCGAAATGAAATAAGGGATTTA
CTTGGCTTTTCGGACTTCTAAATATGCTATGTTTTATCCAAGAAATTAACCATTTTC
45 TAAATCATGGAGCGAATAATTTTCAATAACAGATCCAAAAGACTATATTGCATAA
CTTGCAATGAAATTAATGAGATATATATTGAAATAAAGAATTATGTAAANGCCAT
TCTTTAAAATATTTATAGCATAAATATATGTTATGTAAAGTGTGTATATAGAATT
AGTTTTTTAANCCTTCTGTTAGTGGCTTTTTGCAGAAGCNAAACAGATTAAGTAG
ATAGATTTTGTAGCATGCTGCTTGGTTTTCTTACTTAGTGCTTTAAAATGTTTTTT

TTTATGTTTAAGAGGGGCAGTTATAAATGGACACATTGCCCAGAATNTTTTGTAA
NATGAAGACCAGCAAATGTAGGCTGATCTCCTTCACAGGATACACTTGAAATAT
AGAAGTTATGTTTTAAATATCTCTGTTTTAGGAGTTCACATATAGTTCAGCATTTA
TTGTTTAGGAGTATAATTTTATTTTATCTAAAATAATAGTCTATTTTTTCTTTTGTA
5 TTTTGTATAATCTTAAGCAACAAAGAAAAACCCTAATATTTGAATCTATTTAT
GTCTTTCAATTTAAATTCACCTCAGTTTTTGTATTGTAATATATTTACTTTTACAT
GGTTATAATCACTTTATATTTTTAATGTTTTTTTCACTTAATATTTTATATATACAT
TTCCATGTATTGATGTAGTTAGTCCACATTTAAATTTTTATAGAATTATATAGTTT
TTGAAAAATACAGTCAGTAGATGTTTTATTTTTTAGCTATTCAGTTATGTTTATAA
10 GTTTCATAGCTACTTCTCGACATTTGGTTTGTTTTAATTTTTTTGTATCATAATAG
TCCTATTTTTTTTTCAAGTTGGAGTGAATGTTTTTAGTTTTAAGATAGATAGGAGA
CACTTTTTTATCACATGTAGTCACAACCTGTTTTGTTTTGTAAAACATAGGAAGT
CTCTTTAATGCAATGATTTGTTTTATTTGGACTAAGGTTCTTGAGCTTATCTCC
CAAGGTACTTTCCATAATTTAACACAGCTTCTATAAAAGTGACTTCATGCTTACTT
15 GTGGATCATTCTTGCTGCTTAAGATGAAAAGCATTGGTTTTTTAAAATTAGAGAA
TAAAATATGTATTTAAATTTTTGGTGTGTTACATAAAGNGATGTAGCTAAAATG
TTTTCATAGGCTATTATATATNCTCGCAGCATTTCCAGTTAAGAGGATATTAGGT
ATATAATTCTCTTCTTAACCGAATGTCAGATGGTCTTACGCCACAGGGTGCAGGT
AACCTTGGCCTGTAAGCACCAACCGATCCAGGGATCATTGTCTAAATAGGTTACT
20 ATTGTTTGTTCATCTGGAATTCGAGGGTGCACAAATTACCAGCAGCCTGAGGG
AGGTCTTATTGGAAGGCTTCCTGCAGGAGGTGGCATCTGATCCGGGCTAGACAT
GGGAGTTGGAATTTTCCAGACAGGGAAGGGCACTGTGGGTGGAAAACAAAGCAC
GAACAAACGTATGGTGTGGGACCAAGCCTCACATGGTGCATAAATGATCAGAGG
TGAGGCTGAAGCCTAGGTGTGTGTCAGGGGAAGAGCTAGAAAGGAAGGTGGGG
25 CAGGGAAGCTCAGTGAGTGTCTGCTACATGTGAGGCTTCATTCTGAGCACCAACT
CTGCGCGCTAATGCCACGAAGTGGAGTCATGATTCTTCCATTTTCCAGGTGAAGA
AACCAAAGCACGGGGAGAATTAGCTTGTCCAAGGGCTCATGGCCAGTCGGTGGT
GCCACTGGGATTTAACCAGGGATTCCAGCTGTGGAAGCTGCATGCTGCCAGCTGA
GCACTCCGTCTGTCCACCCTGGCAAATGACATGCTGAGGGCTGGGGGCAGTCATC
30 TTTCCAGCAGTTGTGACACCAGAAATAATGATAATGCATCAGCCAGGTGGGCAAG
AACTCAGACTTTGTGGTCAGACCTCGCTGTGGCAGGGAGCTTAGAAAAGTCACTT
TTCCTCCACAGCTGTGTAACATGGGGAAAGGGGGATGCTCAGCTCACCTCTCATG
GCCCTTGTGTGGGGATTTCAAGGGTAAATGCTGGAAGCACTGAATATACAGC
ACTTAGTAGAGGCTTTGCAAGCGGCTGTCCTCACCCAAACGGATCCTTCCCCAGG
35 AAAGCTCTGCAAATGGAGCCACTTGGCTTTTTGCCTGATGCCATATTCCGTTGTTT
AAAACGGCGATCCCAAACCTTAAGAGTATGAAAGGGGTGTTTTGCAGACAATGCA
TAATTAACCACTTCTAAACACAGGGTGTGCCAGGCTCCCTCAAAGCTGTTAATTA
TTCTTCATTAGTGATCTTAAGTTAATGTAAAATAATCCTGGAGCTCTGCCAGAGG
CTCGGGCAGGGGAAGGAGCAGAGCCGCTTATTTCAACTAGCAAACGGAAAGAAA
40 TCTTCACGGGGCGCCTCTGCGTTCTGCCTTGGTTGTGGGGAGATGCCTCTATAGA
CTCTTTAGCTCTGCCCAAAGGCCATTGTGGGAGGCGGCAAGCCCTCTCCCAAGTT
CCCAGAGCCCAGCCGACCTCAGGGTACTTTGGTTAATGAAATAGTTCAGGTGGG
AAGAAAATATGGAGGAGAGTAGTATACCCATCGCCCAGCTTCCAAAATAAGCTG
TTAATGGTGTGGTGGACTGCCCCCTGTGGGCCACCCACAAATCTTATCCCTTTCCT
45 GCTTCCCCAGAGCTAAGCCTAAACAGTCCCTCTTGTTTGGTGTGTAGATTTCCCAT
GCACATTTTTTTAAATTGCTGTAGGTACATAGTAAGTGTATATATTTATGGGGTAC
GTGAGATGTTTTGACACAGGCACGCAATGTGAAATACACACTTCATGGAGAATTC

SEQ ID NO: 787

>M81882

AGCTCGCCCGCAGCTCGCACTCGCAGGCGACCTGCTCCAGTCTCCAAAGCCGATG
GCATCTCCGGGCTCTGGCTTTTGGTCTTTCGGGTCGGAAGATGGCTCTGGGGATT
5 CCGAGAATCCCGGCACAGCGCGAGCCTGGTGCCAAGTGGCTCAGAAGTTCACGG
GCGGCATCGGAAACAACTGTGCGCCCTGCTCTACGGAGACGCCGAGAAGCCGG
CGGAGAGCGGCGGGAGCCAACCCCCGCGGGCCGCCGCCGGAAGGCCGCCTGCG
CCTGCGACCAGAAGCCCTGCAGCTGCTCCAAAGTGGATGTCAACTACGCGTTTCT
CCATGCAACAGACCTGCTGCCGGCGTGTGATGGAGAAAGGCCCACTTTGGCGTTT
10 CTGCAAGATGTTATGAACATTTTACTTCAGTATGTGGTGAAAAGTTTCGATAGAT
CAACCAAAGTGATTGATTTCCATTATCCTAATGAGCTTCTCCAAGAATATAATTG
GGAATTGGCAGACCAACCACAAAATTTGGAGGAAATTTTGATGCATTGCCAAAC
AACTCTAAAATATGCAATTAACAGGGCATCCTAGATACTTCAATCAACTTTCT
ACTGGTTTGGATATGGTTGGATTAGCAGCAGACTGGCTGACATCAACAGCAAAT
15 ACTAACATGTTACCTATGAAATTGCTCCAGTATTTGTGCTTTTGAATATGTCAC
ACTAAAGAAAATGAGAGAAATCATTGGCTGGCCAGGGGGCTCTGGCGATGGGAT
ATTTTCTCCCGGTGGCGCCATATCTAACATGTATGCCATGATGATCGCACGCTTTA
AGATGTTCCCAGAAGTCAAGGAGAAAGGAATGGCTGCTCTTCCCAGGCTCATTG
CCTTCACGTCTGAACATAGTCATTTTCTCTCAAGAAGGGAGCTGCAGCCTTAGG
20 GATTGGAACAGACAGCGTGATTCTGATTAAATGTGATGAGAGAGGGAAAATGAT
TCCATCTGATCTTGAAAGAAGGATTCTTGAAGCCAAACAGAAAGGGTTTGTTCCT
TTCCCTCGTGAGTGCCACAGCTGGAACCACCGTGTACGGAGCATTGACCCCTCT
TAGCTGTCGCTGACATTTGCAAAAAGTATAAGATCTGGATGCATGTGGATGCAGC
TTGGGGTGGGGGATTACTGATGTCCCGAAACACAAGTGGAAACTGAGTGGCGT
25 GGAGAGGGCCAACCTCTGTGACGTGGAATCCACACAAGATGATGGGAGTCCCTTT
GCAGTGCTCTGCTCTCCTGGTTAGAGAAGAGGGATTGATGCAGAATTGCAACCA
AATGCATGCCTCCTACCTCTTTCAGCAAGATAAACATTATGACCTGTCCTATGAC
ACTGGAGACAAGGCCTTACAGTGCGGACGCCACGTTGATGTTTTTAACTATGGC
TGATGTGGAGGGCAAAGGGGACTACCGGGTTTGAAGCGCATGTTGATAAATGTT
30 TGGAGTTGGCAGAGTATTTATACAACATCATAAAAAACCGAGAAGGATATGAGA
TGGTGTGTTGATGGGAAGCCTCAGCACACAAATGTCTGCTTCTGGTACATTCCTCC
AAGCTTGCGTACTCTGGAAGACAATGAAGAGAGAATGAGTCGCCTCTCGAAGGT
GGCTCCAGTGATTAAAGCCAGAATGATGGAGTATGGAACCACAATGGTCAGCTA
CCAACCTTGGGAGACAAGGTCAATTTCTTCCGCATGGTCATCTCAAACCCAGCG
35 GCAACTCACCAAGACATTGACTTCCTGATTGAAGAAATAGAACGCCTTGGACAA
GATTTATAATAACCTTGCTCACCAAGCTGTTCCACTTCTCTAGGTAGACAATTAA
GTTGTCACAACTGTGTGAATGTATTTGTAGTTTGTTCCAAAGTAAATCTATTTCT
ATATTGTGGTGTCAAAGTAGAGTTTAAAAATTAAACAAAAAAGACATTGCTCCTT
TTAAAAGTCCTTTCTTAAGTTTAGAATACCTCTCTAAGAATTCGTGACAAAAGGC
40 TATGTTCTAATCAATAAGGAAAAGCTTAAATTTGTTATAAATACTTCCCTTACTTT
TAATATAGTGTGCAAAGCAAACCTTTATTTTCACTTCAGACTAGTAGGACTGAATA
GTGCCAAATTGCCCCTGAATCATAAAAGGTTCTTTGGGGTGCAGTAAAAAGGAC
AAAGTAAATATAAAATATATGTTGACAATAAAAACTCTTGCCTTTTTCATAGTAT
TAGAAAAAAATTTCTAATTTACCTATAGCAACATTTCAAATGTATTTAAATACAT
45 ATAATTTTACAAAAGGAAAATATATATATTAAAAAAGATATCCTATTTTGTAAAC
TATAGATTTTTATTTATATAGGTTATACAACTGCGGGGGCGGAATT

SEQ ID NO: 788

>AA401448

TTTTTTTTTACAGTTTATCTTTTATTTTCTGCAAATTTAGGAACATATTTACTCGTT
TTCACATTGAATCTTAAGTTTAAGCTCTTCATTTGGTATTTAGGCAATATATGAGA
5 AAAAAATTTTTTTTGTTCATTTGTAATTTTAACAAGTTGAACATTTTACCATGATT
GAACATGTTTTTATTACAGTATTTAACATTCCCCCAAAGAATACCCTGCAAAGTG
TAAACCTTTGTCCCATACTGTGATATTACTGTTCTGCTACAATAAATGTCAAACCT
AAGCACTTTGCAGTTCCTACTTTTGGGAAAATGTTCTAGGGAACTGTATCACAG
GTGAAACTGTTACCCATAAAGTGTAGC

SEQ ID NO: 789

>T84762

ATTCGGCACAGGATGAGCAGAAGAGGTTATCAGCATTAAATTGTTTTGGTTCTAA
ATTTGGAACAGTATATATAATTA AAAAGTAAGGAACATTAGAGGATTTAATTAGA
15 ATAAATACATGTTTTGGAAATACAGTGACCTCTTGCAAGTGTACAAAAGTGCAAA
GTGATATTAGCTGTCATCTGCAATACAGAATCTCATTGCTTTTGCACATGGAGCA
TATAGGGAAACTCCANACAGATCACAATGAGGGTTTCTAAATCTGTTGGGGTTCT
GTCTTCTATTGGGGTTCTGTGAAGGCAAACCACTGTAGGCTTTAGCTGGGGTTCTN
GTCCTATGGACTCGTTGGGGGGNATGCCNTG
20 GGTTTTCCATNCTTACCTGGCAGTCTTGGGGGGGT

SEQ ID NO: 790

>T87069

TTTTTGCTTCTCTGCCCCCTTNCATTTCTTTTGTATTGTTTCTGTGAGAGCACTGA
25 AATGGCAGCCCTGGAATCTACAATTTGGCTCTCCACTGAGCACCTTATCTTGCCA
CCTTAGCCTTAAGAATGAATATGAAGAAAAATACACAGCCACCTCTGTCCAGGG
CAGTAAGAAGGGCTGCAAGGAAGGGGAGGATGGGGACAAGGAAAGGATCAGAT
ACCTGCTCCAGTAGTTNTGAGGCCACTGTGTCTCAGGGGACTCCAGGGAGGAGC
AGAAGAGGGNTCCACGAAGTTATTCTTACGCAGCTGGGGCCAGGGAGGGTCAG
30 AGTNGGTGCCAGGGTGCAAGTTAGGCTAAAGAAGCCACCACTTATTCCTCTCTCT
TGCCCATTTNTGGGGGGGCAAAGGCCATTTGGTCAACCAAGAGTCTTTCCAGGGG
GACCCACAGATATTGCCATGTCCCTNCACACGTCTTTGGNGTCCTTAACN

SEQ ID NO: 791

>AA424743

CATATTTATCGGGATGACAAATCCATAGAATATATTCTTTTATGTTAAATTATGAT
CTTCATATTAATCTTAAAATTTTGTGACGTGTCTTTTTCTTTTTTCCACAGTTTT
AATATATTATTCTTCAACGACATTTTTTGTAACTTTACACTTTTTTGGTTATTTTAT
TTTAAAAAAATGAAAAATTAATTTAAAAAAATGCAAAAAACTGTTGGATTATTTA
40 TTTTAGAAATTCCTCCCTGTTGTGTTGGACTGCAAATTGAGTTTCTTTCTTTAG
GCCTTTCACAACTAGGACTGAGAATGTATGTAAAAGTTCTGTGACAGTACAGAA
GGAAAACAACCTTTTTATGTATAGCTTCTAAAAGGGGAAAAAAAAAAAAAAGAGAA
ACCCTTTGACTTCCACGTGCCCATCT

SEQ ID NO: 792

>AA489331

TTAGTGAAACATTTTCTTTTTATTGAGAACATCTCAAATCCTTTGTCTGTATTTGA
CAGCGTCTCATGCTCAGTTCAGCTGGTCTTGTGCGAGAGGAAGCTCATGCAGTT
GTAACGTGTGGTGTATACACAGATTTACATACAGAGAACACTGAGGATTGCATCT

CAGCAACATGTTTCTCAGCCGAATTACATTCATAGAAAGTGTCCAGATTCTAAAA
TCAAATTAAAAGCATGTAATCCAAAGCCTGAAAAAGCAAACAGCTTTAGGGGCT
GACTCCATTAGCGTTCCATAGACTGTGCTTTTAACCGTTCAGTTCATGTTTAATGG
5 CCCATCGGTTCCCTTACATACCATCAGCTTATGCTGTGGCCAAAAGAAGTGTTCTT
GTGGCTTGGTACTCGTCCCTTCAAACAGTAAACAAGAAAGTGCAGACAGTGCTG
CCAGAGACAG

SEQ ID NO: 793

>T67104

10 CCAGTTTACACTGAAGATCGATCTGAAACTCAGCACCAGCGANAATCCAGA
TTGCCTGTCTCCATGGCTGGTTTTAATTTCCCATTTCTGCAGTGGCTTGTTAATAT
TAGTTCTGACCTTTGGGGCAAGGTGAACACATGGTTGGACTGAAGAGAAAAGGC
TTCTGGTGGCTCAGGAACGTCTTTGGCAACTACAACAGCTGATATTTCAACAGAG
CACATACATCCCCCACTTAACAAGGGTACGTCCTCAGCCTTCTCAGGGAACCAAC
15 GAACACCTCCAGGCTTCCTCTTTGATGCCACCCACTGGACCTGCCTTGGGGGTCT
GTAAATGCAAGAGGAACCGAGTGTTGGATAATTAGCGATGGGAAGAAAAAACCT
CTTAGNATTAAGGTAGGTTT

SEQ ID NO: 794

20 >R65792

TCCAGAGAGTAAGATCAGATTCGTCCACAAAGAGATGGGCATAATACCAAGCTG
GGGTGGCACCACCGGCTAGTTGAAATAATCGGAAGTAGACAAGCTCTCAAAGTG
TTGAGTGGGGCCCTTAAACTGGATTCAAAAAATGCTCTAAACATAGGAATGGTTG
AAGAGGTCTTGCAGTCTTCAGATGAAACTAAATCTCTAGAAGAGGCACAAGAAT
25 GGCTAAAGCAATTCATCCAAGGGCCACCGGAAGTAATTAGAGCTTTGAAAAAAT
CTGTTTGTTCAGGCAGAGAGCTATATTTGGGGGGAAGCATTACAGAACGAAAGA
GATCTTTTAGGGNACAGTTTTGGGGTNGGCCNGCAAATTTTAGAGGCTATTTNCT
AAGGAAGGGNATTTTATTAATATTTGGGTTTTTCCCG

30 SEQ ID NO: 795

>T90621

AGCAGGANCAAGTTTAATAAACGTTTATTGAGCAGTAGAATACAAGTGAGTNCC
NGGANCCNGATACCAAGTCCTGTACAACTGAGGTAATTATTTACAAATGATGG
GTGGCTCAGTGAGATTCTGATTGCATGCGCTGCATGACAAATTATCTACTCAGAG
35 TATGCCTGACACGCCGGAGGGCTNGAGGGGGAACACACTGAAAGCAGTACCAGG
GAGCAGTGCATCTCACAGANCCATTTNTTCATGCCATGAAGTAAACGGTACTTAT
ACAAGTGTACAGTGACGTTCCACGNTCCCCATCTAACACGGNTTGCTGGAANTTT
ACAGGCAGACTGACGTTTTCTTTCACATGTACTCCAAGTAAATCTGGTTAGTGAT
GACCNGGGGGCAGGCGCTGAAGCTTTTCAAAGCCTTACTTCTTTTATCAGCAGCC
40 CGGNTTTTTAT

SEQ ID NO: 796

>AA464067

GAAAGGAAGCTGGGCGTCCTCTGGGCCCCCAACACACGTCCCATTTAGCCCTGC
45 ACAGCGGTCTCCTTCCCCTAAGCCAGCACCGCTGCTCCCTGGACCCGGGAAGGAG
GCTGCCTGGCTGGAGGCCGAGCGATGGGCTGTGCTGAGGATTTGTGCTGTGATT
TGGGCAAATCATTCCAGGTCTTTGGGCCTCCACCCCT

SEQ ID NO: 797

>AA291163

CATCTATAGGTTTTTTTTTATTAGAAAAGAAATTAAGTGTTGTCAGTAGAGATTGA
AGGAAATTAACAATCTTACAATTCTAGAACAGGCAAACCTTCATGATAAGGGATT
5 CTTAAGTTTTCAAAGTGTAGGAGCTCTTTCACAGATACACTCTTGGTGTAGGGGG
CTGTAAGTTTTATCAGATGTTTTACATTTTCATGCTTTAATCTTTGCTGGTAGTCTA
AATAAAATAAATACACAGTGTTTCAGGATTATCTGGATAGCCATCTTAAATAACAG
AGTGTTCCACATGACCACAGCCTCTGCACTTGTGCCTCTGATCCATATGACACCA
AGACCAACTATGCTTTTCATATGATTTCTCCACATTGGGTCTTGTGACTTTTCACA
10 GAATTGTTGAACATTTCCCCAGAGATCCGTGGTTACAGAGAGCTCCAATCTGCTT

SEQ ID NO: 798

>N53024

TGGAGCCCCTGNTGCGGAGATGGCCTCCAGAGGNCAGCTGCAGGGGCACGTTCTG
15 GGCTTAGCGACAGAGGGCAAGCAAGGGACTGGTGTCTCTGGTGAGAGGTGGGTTT
GATGTATCTCTGTCCTATGCTGGTCTCTCTTCTCCTTTATAAAATCCTCTGTGGTC
AACTGACTACTGCGTATCGCAGTGGGAATAAGACTGCACAGTTGCTGGTAGGTG
AGTTTAAAGTCTTAATCTATGCATTCAGAGAAATATTTTTATATGCTTTGTGTAAT
TTATAACAAGGATTTTTTTTTTAGCTTTGTAACTGTGAATTCACCCCTCCTCCTCC
20 ACTGCATATTTAAAGCATGTGTTTCACACTGTGTGTAAACATTCACTGGAAGATTT
TTTCNTTGTGCATTGCTGACTGTTCCAACATNACAAGTATTATTAATAAATAAATAT
TAACTGGACCGGAAAAAAAAGAAAAAAGAGNTCCTTACCCG

SEQ ID NO: 799

>AA398230

GCGGAATGGGAAGCAGTTTATGGAGTTAAGTGGGGCTCTGCTATTTCCCCCAAGA
AGGACTCGGAAGATGTTGATTCCAGGGCAGAGTGAGGGGCAGACGGGATGAGG
CTCTTCTGTAAAGTCCAACAGACGCTCACAGATGCTGGGAGGCTGGGGACTGCC
AGGTTGGGAGCCTCACCCAGAGAGCCTCACTGCATTGACCCACACCCACCACTC
30 ACCCAGCACACAGGGGGCCTCTCCTCACGCTCCAGGCCACCAGGATGGCCCCC
AGGTTACACACAGGCACACGCACACACGCTGCACTCACCACGCACTGAAGGGC
ATCACAGCCCCAAGTCTGGGTAAGAAATTCTCCAC

SEQ ID NO: 800

>H21107

GTTGCATCATTATACATCACACTGAGTAAGAATCGTTTAGCCATCTACATTCAAT
GTTACTGGGTAATATTTNNCTCAAATTATAATTCCCAACACTGATTTTACCTGTGA
CAAAAGGAACAATAGTAATTCCTTGAAGAAGACTAACTGGNAAAAACATTTNGC
TTTTAGTATAAAAGTTCCTAGGNTGCTGAAAGGNACACATACACACCTAAAGAG
40 TCATGGCCTTCTTAAACAGCTTCTTAATCCTTTCTGGGAAATATCCTTTGGTTCA
TTTTTATTGCCCTCTCTNGGGCAAAACAAAGTATGTTAACGCAGGNATCAGTGA
GTTATNTCCTAGGCACTTGTAAGGCAATATCCTTACCAAGAGGGACCATTCAACT
TTTGTAATAATCCGTNAAGCG

SEQ ID NO: 801

zd20g08.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:341246 3'
similar to WP:ZK970.2 CE02402 CLPP-LIKE PROTEASE ;, mRNA sequence
gi|1365390|gb|W58658.1|W58658[1365390]

GCGACCGCCGAGCGACAGATCCAGAACGGCCTGGCCTGCAGCGGTGCCTGACGC

GAACGGCANCCCCGGGCTCTCCCGCTCATTCCCATCGTGGTGGAGCAGACGGGTC
GCGGCGAGNCGCCTGATGACATCTACTCGCGGCTGCTGCGGGANGCACTCAGTG
TGCATCATGGGCCCCGATCGATGACAGCGTTGCCAGCCTTGTTATCGCACAGCTCC
TCTTCCTGCAATCCNGAGAGCAACAAGAAGCCCATCCACATGTACATCAACAGC
5 CCTGGTGGTGTGGTGACCGCGGGCCTGGCATCTACGACACGATGCAGTACATCCT
CAACCCGATCTGCACCTGGTGCGTTGGGCCAGGCCGCCAGCATGGGCTCCCTTG
TTCTCGCCGCCGGAACCCAGGCATGCGCCACTCGCTCCCCAACTCCCGTATCAT
GATCCACCAGCCCTCAGGAGGCGCCCC

10 SEQ ID NO: 802

zw32b03.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:770957 5',
mRNA sequence gi|2112210|gb|AA428170.1|AA428170[2112210]

ATTCGGCAATGGAGAGGATAGGGAGAATATTTACTAACTAAATACCATTCACTA
CTCATGCGTGAGACTGGGTGTACAACTCATCCTCTTTAATGGCATTCTCTTTA
15 AACTATGTTCTTAACAAAATGAGATGATAGGATAGATCCTGGTTACCACTCTTTT
GCTGTGCACATACGGGCTCTGACTGGTTTTAATAGTCACCTTCATGATTATAGCA
ACTAATGTTTGAACAAAGCTCAAAGTATGCAATGCTTCATTATTCAAGAATGAAA
AATATAATGTTGATAATATATATTAAGTGTGCCAAATCAGTTTGACTACTCTCTGT
TTTAGTGTTTATGTTTAAAAGAAATATATTTTTTGTATTATTAGATAATATTTTG
20 TATTTCTCTATTTTCATAATCAGTAATAGTGTATATAAACTCATTTATCTCCTCTT
CATGGCATCTTCAATATGAATCTATAAGTAGTAAATCAGAAAGTAACAATCTATG
GCTTATTTCTATGACAAATCAAGAGCTAGAAAAATA

SEQ ID NO: 803

25 ab35g03.s1 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:842836 3'
similar to gb:M93056 LEUKOCYTE ELASTASE INHIBITOR (HUMAN);, mRNA
sequence

gi|2216491|gb|AA486275.1|AA486275[2216491]
TCTGGACAGTGGTTTTATTGGTAAAGATATAAGACATATTGGCTCTATTAAAAAC
30 TCAGGTAATAAAGCACTAAGCTTGATTTTTGTATTGCTACAGTCTCTTTCTTCTAA
GGGGAAGAAAATCTCCCCAAGAATAGGATGCTACCTGAGGAATTATGCCGAATA
AAGAAAAGGAATGGATGGTCGGCAGTGAAATTTTCTTCGGGCATCAACATGCAG
AAAGTTGCGATGCCTGCTGTGGCAGCTGCCGCCTCTGTTCCCTCTTCATTCACTTC
CACAAATGACTTGTGGACAATTTTGATATAAAAATATCTCTGGCTCCTGACATG
35 CCAGACAGATCAGCCTTGCTACTGTAAAGAGATCCTGCACACCTAGGCGGGCG
AGGTCGGAGTTGAGAGTGTAAGTCTCTTCCAGTTTGAACCTGGGCAAGCTGACAT
TAACTTCAATGAAATCGAGATTCTCAGGTTTAG